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J. E. HILL

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I.—TITLES

The year of publication is omitted where it is the same as the volume year of the "Record" namely (1961).

- Anon. (1).** [Distribution of squirrels near Sheffield]. In Linton, D. L. [Ed.] Sheffield and its region 1956 : 318-319, 1 fig. (Appendix pt. 3).
- Anon. (2).** [Report of] Department of Nature Conservation. Provincial administration of the Cape of Good Hope, Union of South Africa. Report No. 15, 1958, pp. 1-121, illustr.
- Anon. (3).** Report of the [South African] Department of Nature Conservation, Cape Town, No. 16, 1959.
- Anon. (4).** British Cenozoic fossils. London (British Museum (Natural History)) 1959, pp. 1-130, 44 pls.
- Anon. (5).** Report on the status and prospects of animals on the list of endangered species at September 1958 and on certain other mammals. Proc. Int. Un. conserv. Nat. Res. 1960, 1960 : 101-120.
- Anon. (6).** Thirty-Eighth Report. Wild Life Preservation Society of Australia. Aust. Wild Life 3, 5, 1960 : 1-64, illustr.
- Anon. (7).** General Report of Cambridge Ecuador Expedition, 1960.
- Anon. (8).** Large Miocene whale found near Hampton, Virginia. Geotimes 5, 4, 1960 : 29, 3 figs.
- Anon. (9).** [Zoogeographical map of the U.S.S.R.] Moscow (Ministerstva Geologii i Okhrani, Nedr. SSSR) 1960, 4 col. sheets.
- Anon. (10).** Report of the Game and Fisheries Department (Game Section), Uganda Protectorate, 1958-1960, pp. i-iv, 1-52.
- Anon. (11).** Rhinos in danger. Facing extinction in Crater Highlands. Wild Life, Nairobi 2 (4) 1960 : 6-8.
- Anon. (12).** East African duikers. Wild Life, Nairobi 2 (4), 1960 : 49-52, 6 figs.
- Anon. (13).** Identification series No. 4. Small antelopes of East Africa. Wild Life, Nairobi 3 (1) : 49-53, 6 figs.
- Anon. (14).** Identification series. Kobs, waterbucks and reed bucks. Wild Life, Nairobi 3 (2) : 49-52, 3 figs.
- Anon. (15).** Identification series no. 6. Spiral-horned antelopes. Wild Life, Nairobi 3 (3) : 43-45, 3 figs.
- Anon. (16).** Mountain gorilla. Wild Life and Sport 2 (3) : 35-37, 5 figs.
- Anon. (17).** Wild Life Conference at Arusha. Afr. Wild Life 15 : 270-277.
- Anon. (18).** Australia's 1960 whaling season. Norsk Hvalfangsttid. 50 : 142-146, 2 figs., 1 tab.
- Anon. (19).** Pelagic whaling in the Antarctic season 1960/61. Norsk Hvalfangsttid. 50 : 150-156 6 tabs.
- Anon. (20).** The world catch 1960. Norsk Hvalfangsttid. 50 : 293-308.
- Anon. (21).** Whaling operations in the Antarctic in the season 1960/61. Norsk Hvalfangsttid. 50 : 355-379 5 figs. tabs.
- Anon. (22).** Whaling off the Azores. Norsk Hvalfangsttid. 50 : 516.
- Anon. (23).** International Whaling Statistics. Oslo 45 : 1-87, 11 tabs., 46 : 1-58 9 tabs.
- Anon. (24).** [British Schools Exploring Society Arctic Sweden Expedition, 1959.] Natural History Report. Rep. Brit. Sch. Expl. Soc. 1959-60 [1961] : 44-60. [Mammals pp. 48-49.]
- Anon. (25).** Combien reste-t-il de rhinocéros noirs en Afrique. Terre et la Vie 108 : 159-160.
- Anon. (26).** Les australopithecques sont bien les auteurs de la première industrie lithique. Terre et la Vie 108 : 162-163.
- Anon. (27).** Distribution de la myxomatose en Espagne. Terre et la Vie 108 : 375.
- Anon. (28).** Nature conservation in Poland. Oryx 6 : 6-26, 1 pl. 1 map.
- Anon. (29).** The International Union for Conservation of Nature and Natural Resources. African Special Project, Stage I. Oryx 6 : 143-170.

- Anon. (30). Ann. Rep. and Bull. Nyasaland Mus. 1961 (cover photograph).
- Anon. (31). Guide to the Panorama of North American mammals. Misc. Publ. Mus. nat. Hist. Kansas. Univ. No. 25, 1960: 1-31, illustr.
- Anon. (32). Rat en Muis, Wageningen, Nos. 1-3.
- Abbott, H. G. & Belig, W. H. Juniper seed: a winter food of red squirrels in Massachusetts. J. Mammal. 42: 240-244, 1 pl.
- Abbott, H. G. & Parsons, M. A. *Cuterebra* infestation in *Peromyscus*. J. Mammal. 42: 383-385 1 pl.
- Abdulali, H. see Santapan.
- Abel, G. (1). 24 Jahre Beringung von Fledermäusen im Lande Salzburg. Bonn. zool. Beitr. Sonderheft 1960: 25-32 1 fig. 5 tabs.
- Abel, G. (2). Ergebnisse der Fledermausberingung in Salzburg. Säugetierk. Mitt. 9: 39.
- Abraham, A. Struktur und Endigungsformen der Fasern des Nervus aorticus im Aortenbogen des Schweines. Z. mikr. anat. Forsch. 67: 409-426 10 figs.
- Achard, P. L. Golden langurs *Presbytis geei* Gee (Khajuria, 1956) in captivity. J. Bomb. nat. Hist. Soc. 58: 505-507.
- Adam, K. D. Das Mammot aus dem Grabental bei Münsingen (Kanton Bern), Ein überfordertes Leitfossil. Ecl. geol. helv. 53 (1960), 1961: 481-491 13 figs. 4 tabs.
- Adamczewska, K. A. Intensity of reproduction of the *Apodemus flavicollis* (Melchior 1834) during the period 1954-1959. Acta Theriologica 5: 1-21 1 fig. 4 tabs.
- Adams, W. H. Population ecology of white-tailed deer in north-eastern Alabama. Ecology 41 1960: 706-715 7 figs. 6 tabs.
- Adams, W. V. see Roth.
- [Atanas'ou, A. V.] [Zoogeography of Kazakhstan (on the basis of the distribution of mammals)]. Alma-Ata (Izdatel'stvo Akademii Nauk Kazakhskoi SSR) 1960: pp. 1-259 text figs. [In Russian.]
- Agarwala, O. N. see Mahadevan.
- Aguirre, E. (1). Une nouvelle faune à *Hipparion* au Sud de l'Espagne (Granada). Mitt. geol. ges. Wien 52 1960: 17.
- Aguirre, E. (2). Gisements à *Elephas meridionalis* Nesti dans la Province de Grenade (Espagne). C.R. Acad. Sci. Paris 252: 1184-1185.
- Ahlén, I. & Lennestadt, I. Vertebratfaunan vid Tisjön i Dalarna. Fauna och Flora 56: 36-49, 4 figs.
- Ahti, T. The open boreal woodland subzone and its relation to reindeer husbandry. Arch. Soc. zool.-bot. fenn. Vanamo 16, Suppl.: 91-93.
- Aitken, J. T. & Bridger, J. E. Neuron size and neuron population density in the lumbosacral region of the cat's spinal cord. J. Anat. Lond. 95: 38-53 7 figs. 1 pl. 2 tabs.
- Alarukka, Y. Reindeer husbandry in the Soviet Arctic, 1958. Polar. Rec. 10: 404-407 2 tabs.
- Albright, R. Bat banding at Oregon Caves. Murrelet 40 1959: 26-27.
- [Aleksperova, N. A.] (1). [Description of bones of domestic sheep from the Ancient Pantikapei (Kerch).] Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR. No. 8, 1954: 5-13 4 figs. 5 tabs. [In Russian.]
- [Aleksperova, N. A.] (2). [Fossil saiga from Binagadinsk.] In. [Location of Quaternary Fauna and Flora at Binagadinsk 4.] Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR. No. 10, 1955: 10-64 15 figs. 21 tabs. [In Russian.]
- Alekseeva, L. I. (1). Mastodon *Serridentinus gobiensis* from Beger-Mur (Mongolia). Palaeont. Zh. No. 3, 1959: 117-124 2 figs. 2 tabs. [In Russian.]
- Alekseeva, L. I. (2). A Pontian camel from the Crimea. Palaeont. Zh. No. 3, 1959: 146-147. [In Russian.]
- Alekseyeva, L. V. & Nesturkh, M. F. Morphophysiological features of the menstrual cycle in monkeys. Sovet. antrop. Mosk. 2, 3, 1958: 71-83 1 tab. [In Russian.]
- Alekseyeva, L. W. see Levin.
- Alexander, M. M. Shrinkage of muskrat skulls in relation to aging. J. Wildl. Mgmt. 24 1960: 326-329 3 figs.
- Alexandrova, I. V. & Krasovsky, L. I. On elk feeding habits in winter in Kirov region. Zool. Zh. 40: 1246-1250 3 tabs. [Russian, English summary.]
- Alfred, E. R. Imitation rhino horns. Malay Nat. J. 15: 39-40 2 pls.
- [Aliyeva, Sh. B.] [On the study of the rodents of the Nakhichevan A.S.S.R.]. Izvest. Akad. Nauk. Azerbaid. SSR No. 1: 77-82. [Azerbaijani, Russian summary.]
- Alkon, P. U. Nutritional and acceptability values of hardwood slash as winter deer browse. J. Wildl. Mgmt. 25: 77-81 2 figs.
- Allison, A. C. see Blumberg.
- Allison, H. J. see Camp.
- Allsopp, H. Putting manatees to work. New Scient. 12: 548-549 3 figs.
- Almăşan, H., Popescu, C. C. & Scărlătescu, G. Principale specii de vinat din R.P.R. raspândirea pe clase de efective. Natura, Bucureşti Biol. 13 4: 35-43 9 figs. 10 maps. [English summary.]
- Alsterberg, G. Über sättigungsalabile Substanzen in quergestreiften Muskelzellen und anderen Geweben. Ark. Zool. 12: 405-410 5 figs. [English summary.]
- Altmann, M. "Teen-age" problems in the wilderness. Anim. Kingd. 64: 41-44 2 figs.
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Alvarez, T. see Hall.

Amemiya, T. Cytological and cytochemical reaction of the cat ceruminous gland to adrenalin. *Okajimas Folia Anat. Jap.* 36 1960 : 345-383 6 pls.

Amemiya, T. & Okazoe, T. A histochemical study of the sebaceous gland in the external auditory meatus of the cat. *Okajimas Folia Anat. Jap.* 36 1960 : 215-221 2 pls.

Amemiya, T. see Okazoe.

Amir, E. see Nevo.

Amon, R. Klimatische Grenzen einer Wiederansiedlung des Alpensteinbockes in den Ostalpen [Climatological limits for restocking with ibex.] *Meded. Inst. Toeg. biol. No. 50* 1960 : 171-177 1 tab. [English summary.]

Amoroso, E. C. see Davies.

Andersen, J. Biology and management of roe-deer in Denmark. *Terre et la Vie* 108 : 41-53 4 figs.

Anderson, C. C. The elk of Jackson Hole. A review of Jackson Hole elk studies. *Wyoming Game & Fish Comm. Bull. No. 10* 1958 : 1-184 text illustr.

Anderson, C. F. Anesthetizing deer by arrow. *J. Wildl. Mgmt.* 25 : 202-203 1 fig.

Anderson, M. L. Damage by roe deer. *Scot. For.* 15 : 162-163.

Anderson, S. (1). Small mammals from Gilliam County, Oregon. *Murrelet* 36 1955 : 26-27 1 tab.

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Anderson, S. (3). A new method of preparing lagomorph skins. *J. Mammal.* 42 : 409-410 1 fig.

Anderson, S. (4). Mammals of Mesa Verde National Park, Colorado. *Univ. Kans. Publ. Mus. nat. Hist.* 14 : 29-67 3 figs. 2 pls.

Anderson, S. & Long, C. A. Small mammals in pellets of barn owls from Miñaca, Chihuahua. *Amer. Mus. Novit. No. 2062* : 1-3 1 tab.

Anderson, S. see Russell.

Andrychowaka, R. see Petruszewicz.

Angeletti, P. U. see Levi-Montalcini.

Ansell, W. F. H. (1). Contributions to the mammalogy of Northern Rhodesia. *Oec. Pap. Nat. Mus. S. Rhodesia Nat. Sci.* 3 1960 : 361-398 8 figs. 9 tabs.

Ansell, W. F. H. (2). Elephant shrew : a correction. *North Rhod. J.* 4 1960 : 396-397.

Ansell, W. F. H. (3). An unusual tail formation in *Cercopithecus mitis opisthotictus* Sclater. *Mammalia*, Paris 25 : 190-191 1 fig.

Ansell, W. F. H. (4). The range of *Hyaena brunnea* Thunberg in Rhodesia. *Ann. Mag. nat. Hist.* 13 ser. 4 : 249-251 1 fig.

Ansell, W. F. H. see Grimwood.

Aoki, T. see Yasuda.

Apitzsch, E. see Schwarze.

Appel, J. B. Punishment in the squirrel monkey *Saimiri sciureus*. *Science* 133 : 36 1 tab.

Arambourg, C. (1). Vertébrés continentaux du Miocène supérieur de L'Afrique du Nord. *Pub. Carte géol. Alger. Pal. Mem.* 4 1959 : 1-161 52 figs. 18 pls.

Arambourg, C. (2). Précisions nouvelles sur *Libytherium maurusium* Pomel, giraffidé du Villafranchien d'Afrique. *C.R. Soc. géol. Fr.* 1960 : 225.

Arambourg, C. (3). *Prolibytherium magnieri*, un vèléricorne nouveau du Burdigalien de Libye. (Note préliminaire). *C.R. Soc. géol. Fr.* 1961 : 61-63 1 fig.

Arambourg, C. (4). Note préliminaire sur quelques vertébrés nouveaux du Burdigalien de Libye. *C.R. Soc. géol. Fr.* 1961 : 107-109 1 fig.

Arambourg, C. & Arnould, M. Note sur les failles paléontologiques exécutées en 1947-1948 et 1949 dans le gisement Villafranchien de la Garaet Ichkeul. *Notes Ser. Geol. Tunis* 1 1950 : 149-157 1 fig. 3 pls.

Arambourg, C. & Magnier, P. Gisements de vertébrés dans le bassin tertiaire de Syrte (Libye). *C.R. Acad. Sci. Paris* 252 : 1181-1183.

Arata, A. A. Meadow vole (*Microtus pennsylvanicus*) from the Quaternary of Florida. *Quart. J. Fla. Acad. Sci.* 24 : 117-121 1 fig.

Argus. Le boeuf musqué (*Ovibos moschatus* (Zimmermann)). *Zoo, Antwerp* 27 : 14 1 fig.

Armitage, K. B. (1). Frequency of melanism in the golden-mantled marmot. *J. Mammal.* 42 : 100-101 1 tab.

Armitage, K. B. (2). Curiosity behaviour in some mustelids. *J. Mammal.* 42 : 276-277.

Armstrong, F. H. Notes on *Sorex preblei* in Washington State. *Murrelet* 38 1957 : 6.

Armstrong, J. & Quilliam, T. A. Nerve endings in the mole's snout. *Nature, Lond.* 191 : 1379-1380 2 figs.

Arnould, M. see Arambourg.

Arredondo, O. (1). Como identificar los restos óseos de algunos mamíferos Cubanos extinguidos que resultan de suma importancia en las investigaciones arqueológicas y antropológicas. *Bol. Soc. Espeleológica Cuba* [impermanently stenciled periodical] 2 4 [longhand correction to 3] 1956 : 3-38 unnumbered text-figs. [N.V.]

Arredondo, O. (2). Los roedores cubanos extinguidos. *El Cartero Cubano* 17 12 1958 : 8-11 48 unnumbered text-figs. [N.V.]

Arsenjev, V. A. (1). Whale distribution in Bering Sea and the possibility of the development of whale fishing. *Trud. Sovesh. Ichtiol. Kom. No. 12* : 112-124 7 figs. [In Russian.]

Arsenjev, V. A. (2). About the *Balaenoptera acutorostrata* Lac. of the Antarctic. *Trud. Sovesh. Ichtiol. Kom. No. 12* : 125-132 2 figs. 2 tabs. [In Russian.]

Artimo, A. The dispersal and acclimatization of the muskrat, *Ondatra zibethicus* (L.), in Finland. *Pap. Game Res. Finnish Game Foundation Res. Inst. Helsinki No. 21* 1960 : 1-101 42 figs. 4 tabs.

Arvy, L. (1). Contribution à l'histoencytologie des glandes sudoripares du sac interdigital chez *Ovis aries* L. *C.R. Soc. Biol. Paris* 154 1960 (1961) : 2216-2217.

Arvy, L. (2). Données histoencytologiques sur la glande surrénale d'*Ovis aries* L. (Ovinæ, Baird, 1857) var. des Causses du Lot. *C.R. Soc. Biol. Paris* 155 : 25-27.

- Arvy, L. (3). Contribution à l'histoencytologie du rhinarium d'*Ovis aries* L. (Ovinæ, Baird, 1857). C.R. Acad. Sci. Paris 252 : 177-178.
- Arvy, L. (4). Contribution à l'histoencytologie de la surrénale de *Sus scrofa* L. (Suidæ, Gray, 1821), var. domestique. C.R. Acad. Sci. Paris 252 : 467-469 1 fig.
- Arvy, L. (5). Contribution à la connaissance de la glande pinéale de *Bos taurus* L., d'*Ovis aries* L. et de *Sus scrofa* L. C.R. Acad. Sci. Paris 253 : 1361-1363 1 fig.
- Arvy, L. & Bommelaer, D. Recherches histoencytologiques sur les glandes interdigitales chez *Capreolus capreolus* L. (Cervidæ). C.R. Soc. Biol. Paris 154 1960 (1961) : 2212-2215 1 fig.
- Arvy, L. & Lerma, B. de. Sur la présence d'un pigment fluorescent de type porphyrinique dans la glande de Harder de *Meriones crassus* Sundevall, de *M. shawi* Duvernoy, de *M. vinogradovi* Heptner et de *Gerbillus pyramidum* Geoffroy (Rongeurs, Gerbillidæ). C.R. Acad. Sci. Paris 253 : 1012-1014 1 fig.
- Asa-Dorian, P. V. see Norris.
- Asakura, S. Menstrual and sexual cycle of primates. J. Primatology 1 1958 : 162. [Summary.] [In Japanese.]
- Asano, K. see Hanzawa.
- Ascenzi, A. & Bonucci, E. A quantitative investigation of the birefringence of the osteon. Acta anat. 44 : 236-262 8 figs. 10 tabs.
- Aschaffenburg, R., Gregory, M. E., Rowland, S. J. & Thompson, S. Y. The composition of the milk of the African black rhinoceros (*Diceros bicornis*, Linn.) Proc. zool. Soc. Lond. 137 : 475-479 1 fig. 2 tabs.
- Ashcraft, G. C. Deer movements of the McCloud Flats herds. Calif. Fish Game 47 : 145-152 4 figs.
- Ashton, G. C. & Braden, A. W. H. Serum β -globulin polymorphism in mice. Aust. J. biol. Sci. 14 : 248-253 1 pl. 2 tabs.
- Astley Maberly, C. T. Animals of Rhodesia. Cape Town (Howard Timmins) 1959, pp. i-xvi 1-211 text-figs.
- Astre, G. (1). Hyracothéridés de Siran (Hérault). C.R. Soc. géol. Fr. 1960 : 14.
- Astre, G. (2). Quelques variants extrêmes chez *Lophiodon*. Bull. Soc. Hist. nat. Toulouse 95 1960 : 213-224 2 figs.
- Astre, G. (3). Découverte du Mammouth dans les fentes du calcaire de Montmurat (Cantal). C.R. Soc. Géol. Fr. 1960 : 154-155.
- Ato, N. (1). Histochemical investigation on the sweat gland of cattle. Especially on the distribution of protein, mucopolysaccharide, lipid and phosphatases. Okajimas Folia Anat. Jap. 36 : 429-453 2 pls. 3 tabs.
- Ato, N. (2). Histochemical study on the apocrine sweat gland in the circumanal region of cattle. Okajimas Folia Anat. Jap. 37 : 19-27 1 pl.
- Atz, J. W. Raising Ookie. Anim. Kingd. 64 (1) : 13-22 11 figs.
- Augustinsson, K.-B. & Olsson, B. Genetic control of arylsulfatase in the pig. Hereditas 47 : 1-22 2 figs. 2 tabs.
- Austin, C. R. (1). Anomalies of fertilisation leading to triploidy. J. cell. comp. Physiol. 56 suppl. 1 1960 : 1-15 2 figs. 7 tabs.
- Austin, C. R. (2). The mammalian egg. Oxford (Blackwell Scientific Publications), pp. i-viii 1-183 text illustr.
- Avaliani, R. Sh. New data on rodent fauna in Adzharia. Zool. Zh. 40 : 293. [Russian. English summary.]
- Avila-Pires, F. D. de. Roedores colecionados na região de Lagoa Santa, Minas Gerais, Brasil. Arq. Mus. nac. Rio de J. 50 1960 : 25-43. [English summary.]
- Avis, V. The significance of the angle of the mandible : an experimental and comparative study. Amer. J. phys. anthrop. 19 : 55-61, 6 figs.
- Azzali, G. (1). Osservazioni istofisiologiche sulle "isole del Langerhans" dei chiroteri. Monit. zool. Ital. Suppl. 68 1960 : 222-225.
- Azzali, G. (2). Osservazioni sull'attività colinesterasica dell'apparato digerente dei chiroteri. Monit. zool. Ital. suppl. 68 1960 : 230-236 4 figs.
- Backhouse, K. M. Locomotion of seals with particular reference to the forelimb. Symp. zool. Soc. Lond. No. 5 : 59-75 6 figs. 3 pls.
- Backhouse, K. M. & Smart, P. J. G. The mechanism of wave riding in porpoises. Proc. zool. Soc. Lond. 136 : 197-200 1 fig. 1 pl.
- Backhouse, K. M. see Hewer.
- Backhouse, T. C. & Bolliger, A. Morbidity and mortality in the koala (*Phascolarctos cinereus*). Aust. J. Zool. 9 : 24-37, 4 pl. 2 tabs.
- Backhouse, T. C. see Bolliger.
- Backus, R. H. Stranded killer whale in the Bahamas. J. Mammal. 42 : 418-419 1 pl.
- Backus, R. H. & Schevill, W. E. The stranding of a Cuvier's beaked whale (*Ziphius cavirostris*) in Rhode Island, U.S.A. Norsk Hvalfangsttid. 50 : 177-181.
- Bacsanyi, J. see Schmidt-Nielsen.
- Badamshin, B. I. Resources of Caspian seal and the ways of their rational using. Trud. Sovesh. Ichtiol. Kom. No. 12 : 170-179 2 figs. 1 tab. [In Russian.]
- Badoux, D. M. A mechanical interpretation of the shape and cyrtoccephaly in the skull of the Indian elephant, *Elephas maximus*. Säugetierk. Mitt. 9 : 97-105, 2 figs. 1 tab.
- Badreldin, A. L., Kamar, G. A. R., Shafei, M. M. & Marai, I. F. M. Histological structure of wool follicle group in fat-tailed sheep. Acta anat. 44 : 363-373 12 figs.
- [Baevski, Y. B.] [Observations on some interuterine stages of development in sable.] Trud. Inst. Morf. Zhiv. 30 1960 : 246-269 11 figs. 3 tabs. [In Russian.]
- Bährens, D. Zur Bedeutung allometrischer Untersuchungen für das Studium innerartlicher Variabilität des Schädels von Musteliden. Z. Säugetierk. 26 : 154-157 2 figs.
- Bailey, D. W. Rates of subline divergence in highly inbred strains of mice. J. Hered. 50 1959 : 26-30 1 fig. 5 tabs.
- Bailey, P. see Bonin.

- Bailey, S. W. & Dunnet, G. M. The gaseous environment of the pouch young of the brush-tailed possum, *Trichosurus vulpecula* Kerr. C.S.I.R.O. Wildl. Res. Melb. 5 1960 : 149-151 1 fig. 1 tab.
- Baillie, A. H. Observations on the growth and histochemistry of the Leydig tissue in the postnatal prepubertal mouse testis. J. Anat., Lond. 95 : 357-370 6 figs. 3 pls. 1 tab.
- [Baitekunas, P. & Pashkevichus, I.] [New remains of mammoth from Vilnius.] Byull. Kom. Izuch. Chetvert. Perioda 24 1960 : 95-99 3 figs. [In Russian.]
- Bakker, G. History of the California Tule Elk. Los Angeles (City College Press) (Sponsored by Committee for the preservation of the Tule Elk) pp. 1-8 9 figs.
- Baldwin, D. H. see Downing.
- Balph, D. F. Underground concealment as a method of predation. J. Mammal. 42 : 423-424 1 fig.
- Balph, D. F. & Stokes, A. W. Notes on the behaviour of deer mice (*Peromyscus maniculatus rufinus*). Proc. Utah Acad. 37 1960 : 55-62 2 figs. 1 tab.
- Balser, D. S. see Morse.
- Banerjee, A. R. The simian crease. Sci. & Cult. 26 1960 : 282.
- Banfield, A. W. F. (1). Notes on Canadian mammal specimens and types in the British Museum (Natural History), London. Bull. Nat. Mus. Canada Contr. Zool. No. 172 1959 : 112-127.
- Banfield, A. W. F. (2). Notes on the mammals of the Klauane Game Sanctuary, Yukon Territory. Bull. Nat. Mus. Canada Contr. Zool. No. 172 1959 : 128-135 1 fig. 1 tab.
- Banfield, A. W. F. (3). The use of caribou antler pedicels for age determination. J. Wildl. Mgmt. 24 1960 : 99-102 1 fig.
- Banfield, A. W. F. (4). Migrating caribou. Nat. Hist. N.Y. 70 5 : 56-63 illustr.
- Banfield, A. W. F. (5). The wood bison type specimen. J. Mammal. 42 : 553-554.
- Bangham, J. W. see Russell.
- Bannikov, A.-G. (1). L'écologie de *Saiga tatarica* L. en Eurasie, sa distribution et son exploitation rationnelle. Terre et la Vie 108 : 77-85 1 pl.
- Bannikov, A. G. (2). Ecologie et distribution d'*Equus hemionus* Pallas; les variations de sa limite de distribution septentrionale. Terre et la Vie 108 : 86-100 1 pl. 1 fig.
- Barabash-Nikiforov, I. I. To the problem of the acclimatization of *Enhydra lutris* in Murman. Trud. Sovesh. Ichtiol. Kom. No. 12 : 218-221. [In Russian.]
- Barasa, A. & Shochatovits, A. Grandezza e densità delle cellule nervose della corteccia cerebrale di *Elephas indicus*. R.C. Accad. Lincei (8) 30 : 246-249 1 fig. 1 tab.
- Barbosa Sueiro, M. B. & Gomes-Ferreira, J. V. Sur la morphologie et la position des condyles de la mandibule chez les mammifères. (Note préliminaire). C.R. Ass. Anat. 43 1957 : 171-174 5 figs.
- Barbu, P. Contributions à l'étude monographique de *Miniopterus schreibersii* Kuhl. An. Univ. C.I. Parhon, Bucuresti No. 24 1960 : 83-107 32 figs. [Roumanian, French summary.]
- Bargmann, W. Zahngewebe und Zahnhalteapparat. (In Hofer & others.) Primatologia. Handbook of Primatology 3 (2) 1960. Gebias pp. 626-636 5 figs.
- Barid, I. (1). Postnatal changes of chemical composition of the ground-squirrel (*Citellus citellus*). Bull. Acad. Serbe Sci. Cl. Sci. Mat. Nat. 26 : 3-8.
- Barid, I. (2). Tolerance to starvation in rats during the first weeks of their postnatal life. Bull. Acad. Serbe Sci. Cl. Sci. Mat. Nat. 26 : 9-14 1 tab.
- Barkalow, F. S. (1). A large cottontail litter. J. Mammal. 42 : 254.
- Barkalow, F. S. (2). The porcupine and fisher in Alabama archaeological sites. J. Mammal. 42 : 544-545.
- Barker, D. & Chin, N. K. Efferent innervation of mammalian muscle-spindles. Nature, Lond. 190 : 461-462.
- Barker, D. & Ip M. C. A study of single and tandem types of muscle-spindle in the cat. Proc. roy. Soc. 154B : 377-397 4 figs. 5 tabs.
- Barnard, P. J. The phenomenon of game migration in the Kalahari-Gemsbok National Park with a discussion of various marking methods to facilitate a study of the routes followed. Koedoe No. 4 : 178-194.
- Barnard, P. J. & Van der Walt, K. Translocation of the bontebok (*Damaliscus pygargus*) from Bredasdorp to Swellendam. Koedoe No. 4 : 105-109.
- Barnawell, E. B. Inbred mice in teaching elementary genetics. Turtlox News 39 : 2-5 4 tabs.
- Barnes, R. D. & Longhurst, W. M. Techniques for dental impressions, restraining and embedding markers in live-trapped deer. J. Wildl. Mgmt. 24 1960 : 224-226 2 figs.
- Barnett, C. H. & Marsden, C. D. Functions of the mammalian carotid rete mirabile. Nature, Lond. 191 : 88-89.
- Barnett, S. A. (1). The behaviour and needs of infant mammals. Lancet 1961 : 1067-1071.
- Barnett, S. A. (2). Some effects of breeding mice for many generations in a cold environment. Proc. roy. Soc. 155B : 115-135 3 figs. 10 tabs.
- Barnett, S. A. & Coleman, E. M. (1). The effect of low environmental temperature on the reproductive cycle of female mice. J. Endocrin. 19 1959 : 232-240 5 figs. 2 tabs.
- Barnett, S. A. & Coleman, E. M. (2). "Heterosis" in F₁ mice in a cold environment. Genet. Res. Camb. 1 1960 : 25-38 3 figs. 7 tabs.
- Barnett, S. A., Coleman, E. M. & Manley, B. M. Mortality, growth and liver glycogen in young mice exposed to cold. Quart. J. exp. Phys. 45 1960 : 40-49 4 figs. 4 tabs.
- Barnett, S. A., Eaton, J. C. & McCallum, H. M. Physiological effects of "social stress" in wild rats—II. Liver glycogen and blood glucose. J. Psychosom. Res. 4 1960 : 251-260 1 fig. 4 tabs.
- Barr, T. C. Caves of Tennessee. Bull. geol. Surv. Tenn. 64 : vii + 567 1 pl. figs.
- Barr, T. R. B. see Verts.
- Barriety, L. Capture d'un *Halichoerus grypus*. Bull. Centr. Rech. sci. Biarritz 3 1960 : 265.

- Barrowmen, J. & Craig, M. Haemoglobins of foetal C57BL/6 mice. *Nature, Lond.* 190 : 818-819 1 fig.
- Bartholomew, G. A. & Hudson, J. W. Aestivation in the Mohave ground squirrel *Citellus mohavensis*. *Bull. Mus. comp. Zool. Harv.* 134 1960 : 193-208 3 figs.
- Bartholomew, G. A. & MacMillen, R. E. Oxygen consumption, estivation, and hibernation in the kangaroo mouse, *Microdipodops pallidus*. *Physiol. zool.* 34 : 177-183 3 figs.
- Bartolomei, G. Nota preliminare sulla fauna della Grotta Maggiore di S. Bernardino nei Colli Berici (Vicenza). *Ann. Univ. Ferrara N.S. Pal. umana e palet.* 3 1960 : 119-125 1 fig. [English summary.]
- Bashenina, N. Y. Materials on the ontogenesis of thermoregulation in the common field mouse (*Microtus arvalis* Pall.) and *Lagurus lagurus* Pall. *Mater. Poznan. faun. Flor. SSSR, N.S. (Zool.)* 48 1960 : 111-154 12 figs. 8 tabs. [Russian, English summary.]
- Baskett, T. S. see Conaway.
- Basmajian, J. V. see Ranney.
- Bassett, E. G. Observations on the retractor clitoridis and retractor penis muscles of mammals, with special reference to the ewe. *J. Anat. Lond.* 95 : 61-77 5 figs. 3 pls.
- Battaller, J. R. Notas estratigráficas y paleontológicas. Mamíferos fósiles cuaternarios de Cataluña. *An. Esc. Perit. agric. Barcelona* 14 1960 : 3-9.
- Batcheler, C. L. A study of the relations between roe, red and fallow deer, with special reference to Drummond Hill forest, Scotland. *J. Anim. Ecol.* 29 1960 : 375-384 2 figs. 1 pl. 2 tabs.
- Bateman, A. J. The induction of dominant lethal mutations in rats and mice with triethylenemelamine (TEM). *Genet. Res. Camb.* 1 1960 : 381-392 2 figs. 4 tabs.
- Bateman, J. A. The mammals occurring in the Bredasdorp and Swellendam districts, C.P., since European settlement including a list comparing the types in these districts with those of the Cradock and Uitenhage districts, C.P. *Koedoe No.* 4 : 78-100.
- Bateman, N. (1). High frequency of a lethal gene (*ts*) in a laboratory stock of mice. *Genet. Res. Camb.* 1 1960 : 214-225 1 fig. 6 tabs.
- Bateman, N. (2). Selective fertilization at the I-locus of the mouse. *Genet. Res. Camb.* 1 1960 : 226-238 2 figs. 5 tabs.
- Battetta, J. see Viret.
- Bauchot, R. Le volume hypophysaire chez les insectivores. *Mammalia, Paris* 25 : 162-183 7 figs. 3 tabs. [English summary.]
- Bauchot, R. & Stephan, H. (1). Le cerveau de *Setifer setosus* (Schreber) (Insectivora, Tenrecidae). *Mem. Inst. sci. Madagascar* 13A 1960 : 139-148 2 figs. 2 pls.
- Bauchot, R. & Stephan, H. (2). Etude quantitative de quelques structures commissurales de cerveau des Insectivores. *Mammalia, Paris* 25 : 314-341 7 figs. 8 tabs. [English summary.]
- Bauer, K. & Steiner, H. Beringungsergebnisse an der Langflügelfledermaus (*Miniopterus schreibersi*) in Österreich. *Bonn. zool. Beitr. Sonderheft.* 1960 : 36-53 4 figs. 4 tabs.
- Baumgartel, M. W. Death of two male gorillas and rescue of an infant gorilla. *Afr. Wild Life* 15 : 6-13 3 figs.
- Bawden, C. R. The snow man. *Man* 59 1959 : 217-218.
- Bazan-Kubik, I. (1). Variations in the thymus gland of the harvest mouse, *Micromys minutus* (Pallas 1771). *Acta Theriologica* 4 : 285-287.
- Bazan-Kubik, I. (2). Morphohistological change in some organs of *Mus musculus* Linnaeus, 1758, from a coal mine. *Acta Theriologica* 5 : 99-113 1 pl.
- Beals, E. W., Cottam, G. & Vogl, R. J. Influence of deer on vegetation of the Apostle Islands, Wisconsin. *J. Wildl. Mgmt.* 24 1960 : 68-80 6 figs. 4 tabs.
- Beaner, P. D. see Ferris.
- Bearn, J. G. Hormonal control of the development of the thymus of the foetal rabbit. *Nature, Lond.* 192 : 875-876 1 tab.
- Beatty, R. A. (1). The birth weight of rabbits born after heterospermic insemination. *Genet. Res.* 1 1960 : 39-49 3 tabs.
- Beatty, R. A. (2). Genetics of gametes V. The frequency distribution of the head length of rabbit spermatozoa, and a search for dimorphism. *Proc. roy. Soc. Edinburgh* 68B : 72-82 2 tabs. 1 fig.
- Beatty, R. A. & Billett, F. S. Genetics of gametes VI. Attempted genetic transformation in the rabbit. *Proc. roy. Soc. Edinburgh* 68B : 83-90.
- Beaumont, G. de. Les chiens du "Puits de Ronze" à Orignac (Ardèche) avec quelques remarques sur la variabilité dentaire chez les Canidae. *Bull. Soc. vaud. Sc. nat.* 67 : 369-386 7 figs. 1 tab.
- Beaumont, M. G. de. Recherches sur *Felis attica* Wagner du Pontien eurasiatique avec quelques observations sur les genres *Pseudaelurus* Gervais et *Proailurus* Filhol. *Nouv. Arch. Mus. Hist. nat. Lyon No.* 6 : 15-51 4 figs. 3 pls. [English summary.]
- Beer, J. R. (1). A collection of deer mice from Otter Rock, Oregon. *Murrelet* 40 1959 : 28-29 1 tab.
- Beer, J. R. (2). Hibernation in *Perognathus flavescens*. *J. Mammal.* 42 : 103.
- Beer, J. R. (3). Winter home ranges of the red-backed mouse and white-footed mouse. *J. Mammal.* 42 : 174-180 2 figs.
- Beer, J. R. & MacLeod, C. F. Seasonal reproduction in the meadow vole. *J. Mammal.* 42 : 483-489 2 tabs.
- Beer, J. R. see Davis.
- Behura, B. K. Studies on the wild mammals of Orissa : 1. Distribution. *Proc. Indian Sci. Congr.* 43 3 1959 : 405-406.
- Behura, B. K. see Ghosh.
- Belig, W. H. see Abbott.
- Belkovich, V. M. To the physical thermoregulation in belucha. *Trud. Sovesh. Ichtiol. Kom. No.* 12 : 50-59 5 figs. [In Russian.]
- Belokryz, L. S. To the systematics and phylogeny of dinotherids (in connection with a new discovery of a dinotherium in the Upper Sarmatian of Krivoy Rog.) *Palaeont. Zh.* 1960 4 : 95-103 2 figs. 1 pl. 4 tabs. [In Russian.]

- Belova, T. I. (1).** Cytoarchitectonics of the precentral region of the brain cortex in apes and man. Sovet. antrop. Mosk. 2 3 1958: 57-70 7 figs. [In Russian.]
- Belova, T. I. (2).** The structure of precentral area of the brain cortex in rhesus and pig-tailed macaques in connection with their ecology. Vopros. antrop. Mosk. No. 2 1960: 55-67 6 figs. 4 tabs. [In Russian.]
- Belova, T. I. (3).** The postcentral area of the cerebral cortex in mantled baboons (*Papio hamadryas*). Vopros. antrop. Mosk. No. 6: 30-43 3 figs. 1 tab. [In Russian.]
- Belova, T. I. & Khristianova, E. N. (1).** Skull splitlines of man, monkeys and apes. Sovet. antrop. Mosk. 1 1957: 223-232 5 figs. [In Russian.]
- Belova, T. I. & Khristianova, E. N. (2).** The splitlines on the skeleton bones of man and the apes. Sovet. antrop. Mosk. 2 1 1958: 81-89 9 figs. [In Russian.]
- [Belyaeva, E. I.]** [On Mongolian Aceratheres.] Trav. Inst. Paléont. Akad. Sci. USSR 77 1960: 108-127 6 figs. 8 tabs. [In Russian.]
- [Belyaeva, E. I. & Gabuniya, L. K.]** [New finds of Caucasian platybelodonts.] Trud. Inst. Paleobiol. Gruz. SSR 5 1960: 63-105 12 figs. 2 pls. 7 tabs. [Russian, Georgian summary.]
- Benderá, I. C. (1).** Notas sobre los micromamíferos del Perú. Rev. Univ. Nac. Cuzco 49 1959: 265-269.
- Benderá, I. C. (2).** Notas bioecológicas sobre algunos Quirópteros del Brasil. Bol. Fac. Cienc. Univ. Cuzco No. 1 1960: 23-30.
- Benderá, I. C. (3).** Clava para las familias de murciélagos Peruanos. Biota, Lima 3: 181-183.
- Benjamin, B. R.** see Nair.
- Benkovski, L. M.** On the geographical distribution of the weasel and on its ecology on Sakhalin. Zool. Zh. 40: 1747. [Russian, English summary.]
- Bennett, D.** Brain hernia, a new recessive mutation in the mouse. J. Hered. 50 1960: 264-268 4 figs.
- Benson, C. W.** see Grimwood.
- Benson, S. B.** see Johnson.
- Bentley, E. W., Hammond, L. E. & Taylor, E. J.** The comparative toxicity of 0.025% and 0.005% warfarin to *Rattus norvegicus*. Plant Path. 4 4 1955: 120.
- [Beranashstein, F. Y. & Sapazhkov, S. F.]** [On the problem on the influence of cobalt salts on blood pressure in animals.] Vestn. Akad. Nauk. Beloruss. S.S.R. biol. No. 1: 61-63 3 figs. [In Byelorussian.]
- Beresantsev, Yu. A.** The role of the zoo in trichinellosis epizootology. Zool. Zh. 40: 934-935. [Russian, English summary.]
- Berg, B. N.** see Simms.
- Berg, R. (1).** Comparative anatomical measurements of the vena cava caudalis of domestic animals. Wiss. Z. Humboldt-Univ. Berlin, Math.-Nat. R. 9 1959/60: 531-564 22 figs. [German, English summary.]
- Berg, R. (2).** Agenesis renalis unilateralis bei einer Katze. Anat. Anz. 109 1960: 36-40 4 figs.
- Berg, R. (3).** Glandula suprarenalis accessoria bei einem Pferd. Anat. Anz. 108 1960: 166-171 3 figs.
- Bergerud, A. T.** Sex determination of caribou calves. J. Wildl. Mgmt. 25: 205 1 fig.
- Bergh, W. van den.** L'antilope bongo (*Boocercus euryceros* (Ogilby)). Zoo, Antwerp 27: 7-13 10 figs.
- Bergounioux, F. M. & Crouzel, F. (1).** *Zygodolopodon borsini* Hays du Musée d'Histoire Naturelle de Dijon. Bull. sci. Bourgogne 19 1960: 1-20 5 figs. 1 pl. 1 tab.
- Bergounioux, F. M. & Crouzel, F. (2).** Les genres *Zygodolopodon* et *Turicius* en Europe occidentale. Bull. sci. Bourgogne 19 1960: 21-27 1 pl.
- Bergounioux, F. M. & Crouzel, F. (3).** Mastodontes du Miocène du Bassin d'Aquitaine. Bull. Soc. Hist. nat. Toulouse 95 1960: 232-286 3 figs. 1 tab.
- Bergounioux, F. M. & Crouzel, F. (4).** Classification des Dinotheriides d'Europe. C.R. Acad. Sci. Paris 253: 510-512.
- Bernard, J.** A propos d'un croisement entre *Arvicola terrestris terrestris* L. et *A. terrestris shermani* Shaw. Mammalia, Paris 25: 120-121.
- Berner, L.** Note sur le hamster doré de Syrie (*Mesocricetus auratus* [Wat.]). Bull. Soc. Linn. Provence 22 1959: 68-72.
- Bernstein, S. E.** see Stevens.
- Berry, C. M., Haft, J. S., Harman, P. J. & Hovde, C. A.** Significance of pharmacologic state in recording optic potentials from cat cerebellum. Neurology, Minneapolis 9 1959: 845-852 6 figs.
- Berry, J. A.** The occurrence of a leopard seal (*Hydrurga leptonyx*) in the tropics. Ann. Mag. nat. Hist. 13th ser. 3 1960 [1961]: 591.
- Berry, R. J.** Genetical studies on the skeleton of the mouse, XXVI. Pintail. Genet. Res. Camb. 1 1960: 450-451 4 figs. 1 pl. 3 tabs.
- Bersin, A. A.** Materials to the teeth development and the determination of sperm whale growth. Trud. Sovesh. Ichtiol. Kom. No. 12: 94-103 3 figs. [In Russian.]
- Betesheva, E. I.** Feeding of the common whales of the Kuril region. Trud. Sovesh. Ichtiol. Kom. No. 12: 104-111. [In Russian.]
- Bhatnagar, D. S.** see Chaudhary.
- Bhatnager, S. P.** On the structure and distribution of the specialized tissue of the heart of shrew. Proc. Indian Sci. Congr. 47 3 1960: 487.
- Bhattacharya, P.** see Makhorjee.
- Bider, J. R.** An ecological study of the hare *Lepus americanus*. Canad. J. Zool. 39: 81-103 13 figs. 1 tab.
- Biegert, J.** Volarhaut der Hände und Füße. In Hofer, H., Schultz, A. H. & Starck, D. [Eds.] Primatologia Bd. II, Teil 1, Lief. 3 Basel (S. Karger), pp. 1-326 101 figs 58 tabs.
- Bieguszewski, H.** see Gill.
- Bieri, R. A.** see Parmalee.
- Bilewicz, S.** Corroboration of the chromosome number 48 in the somatic cells of the chimpanzee. Przegl. zool. 5: 176-177. [In Polish.]
- Billett, F. S.** see Beatty.
- Birkenmajer, K.** Raised marine features of the Hornsund area, Vestspitsbergen. Studia geol. polon. 5 1960: 7-95 11 pls. 18 figs.

- Biswell, H. H.** Manipulation of chamise brush for deer range improvement. *Calif. Fish Game* **47** : 125-144 12 figs.
- Black, C. C. (1).** A second record of the fossil rodent *Palustrinus* Wood. *Breviora* No. 131 1960 : 1-3 1 fig.
- Black, C. C. (2).** New rodents from the early Miocene deposits of Sixty-Six Mountain, Wyoming. *Breviora* No. 146 : 1-7 2 figs.
- Blair, R. M.** Deer forage increased by thinning in a Louisiana loblolly pine plantation. *J. Wildl. Mgmt.* **24** 1960 : 401-405 1 fig.
- Blair, W. F. & Kennerly, T. E.** Effects of X-irradiation on a natural population of the wood-mouse (*Peromyscus leucopus*). *Texas J. Sci.* **11** 1959 : 137-149 1 fig. 6 tabs.
- Blancou, L.** Destruction and protection of the wild life in French Equatorial and French West Africa. Part V. Primates. *Afr. Wild Life* **15** : 29-34.
- Bligh, J.** The synchronous discharge of apocrine sweat glands of the Welsh mountain sheep. *Nature, Lond.* **189** : 582-583 1 fig. 1 tab.
- Blinks, D. C.** *see* Lyman.
- Blouch, R. I.** Winter deer mortality on two private hunting clubs. *Pap. Mich. Acad. Sci.* **46** : 277-287 3 figs. 2 tabs.
- B[lower], J. H.** Operation rhino. *Wild Life and Sport* **2** (2) : 5-10 illustr.
- B[lower], J. H. (2).** Wildlife of Uganda No. 1. The roan antelope. *Wild Life and Sport* **2** (2) : 11-13 illustr.
- Blower, J. H. (3).** Leopard lore. *Wildlife and Sport* **2** (3) : 15-19 4 figs.
- B[lower], J. H. (4).** Wildlife of Uganda—2. The water buck. *Wild Life and Sport* **2** (3) : 32-34 illustr.
- Blumberg, B. S., Allison, A. C. & Garry, B.** The haptoglobins, hemoglobins and serum proteins of the Alaskan fur seal, ground squirrel and marmot. *J. cell. comp. Physiol.* **55** 1960 : 61-71 7 figs.
- Blunt, M. H.** *see* Evans.
- Boback, A. W.** Westwanderung von Elchen, *Alces alces*. *Säugetierk. Mitt.* **9** : 159-162.
- [Bobrinskii, N. A.]** [Animal world and nature in the U.S.S.R.]. Moscow (Izdatel'stvo Akad. Nauk SSSR) 1960 pp. 1-414 frontis. 23 pls. map text illustr. [In Russian.]
- Bodmer, W. F.** Viability effects and recombination differences in a linkage test with pallid and fidget in the house mouse. *Heredity* **16** : 485-495 6 tabs.
- Bogdanov, O. P.** On the distribution and ecology of *Myotis longicaudatus* Ognev. *Zool. Zh.* **39** 1960 : 1895-1896 2 tabs.
- [Bogolyubskii, S. N.]** [The origin and transformation of domestic animals.]. Moskva (Gosudarstvennoe Izdatel'stvo "Sovetskaya Nauka.") 1959 pp. 1-593 4 pls. text illustr. [In Russian.]
- [Bogolyubskii, S. N. et al.]** [Breed morphological distinctions in the development of sheep.]. *Trud. Inst. Morf. Zhiv.* **35** : 1-275 figs. [In Russian.]
- Boguleanu, Gh.** *see* Manolache.
- Bohlken, H. (1).** Allometrische Untersuchungen an den Schädeln asiatischer Wildrinder. *Z. Säugetierk.* **26** : 147-154 8 figs. 1 tab.
- Bohlken, H. (2).** Der Kouprey, *Bos (Bibos) sauveli* Urbain 1937. *Z. Säugetierk.* **26** : 193-254 48 figs. 11 tabs. [English summary.]
- Bolliger, A. & Backhouse, T. C.** The blood of the koala (*Phascogale cinerea*). *Aust. J. Zool.* **8** 1960 : 363-370 2 tabs.
- Bolliger, A.** *see* Backhouse.
- Bolwig, N.** An intelligent tool-using baboon. *S. Afr. J. Sci.* **57** : 147-152 4 figs.
- Bommelaer, D.** *see* Arvy.
- Boné, E.** *Oreopithecus bambolii*. A propos du jalonnement tertiaire de l'Homme. *Rev. Quart. sci.* **20** 1959 : 215-246 map.
- Bonin, G. v. & Bailey, P.** Pattern of the cerebral isocortex. In *Hofer, H., Schultz, A. H. & Starck, D.* [Eds.] *Primatologia Bd. II, Teil 2, Lief 10* : [i-iv] 1-42 33 figs 4 pls.
- Bonuoci, E.** *see* Ascenzi.
- Booolootian, R. A.** The distribution of the California sea otter. *Calif. Fish Game* **47** : 287-292 3 figs. 1 tab.
- Booth, A. H.** Small mammals of West Africa. London (Longmans, Green & Co. Ltd.) 1960 : pp. i-xii 1-68 2 figs. 76 col. figs.
- Borrell, A. E.** Fox squirrel attacks mourning dove. *J. Mammal.* **42** : 101.
- Borg, K.** Toxoplasmosis in wildlife in Sweden. *Trans. N. Amer. Wildl. Conf. No.* **26** : 219-229 2 figs. 1 tab.
- Borri, P. & Macchi, G.** Topografia delle proiezioni corticifughe nel tronco cerebrale della cavia. *Monit. zool. Ital. Suppl.* **68** 1960 : 264-266.
- Botsharov, J. C.** Histostructure of the ovaries on rhesus monkey (*Macaca rhesus*) during postnatal oogenesis. *Vopros. antrop. Mosk. No.* **2** 1960 : 123-125 1 fig. [In Russian.]
- Bouchud, J. & Wernert, P.** Remarques sur les formes des bois de Rennes recueillis dans les loess d'Achenheim, près de Strasbourg, et dans les stations paléolithiques du Sud-Ouest de la France. *C.R. Acad. Sci. Paris* **252** : 579-581.
- Bourgeois, S.** *see* Zimny.
- Bourlière, F.** Lifespans of mammalian and bird populations in nature. In *Wolstenholme, G. E. W. & O'Connor, M.* *Ciba Foundation colloquia on ageing, 5. The lifespan of animals.* London (J. & A. Churchill, Ltd.) 1959 : 90-105 5 figs. 2 tabs.
- Bovet, J.** Experimentelle Untersuchungen über das Heimfindervermögen von Mäusen. *Z. Tierpsychol.* **17** 1960 : 728-755 18 figs. 12 tabs. [English summary.]
- Bowden, R. E. M. & Schener, J. L.** Comparative studies of the nerve supply of the larynx in Eutherian mammals. *Proc. zool. Soc. Lond.* **136** : 325-330 4 pls. 3 tabs.
- Bowman, J. C. & Falconer, D. S.** Inbreeding depression and heterosis of litter size in mice. *Genet. Res. Camb.* **1** 1960 : 262-274 4 figs. 3 tabs.
- [Boyle, C. L.]** Editorial notes. *Oryx* **6** : 83-85 1 fig.
- Braden, A. W. H.** Genetic influences on the morphology and function of the gametes. *J. cell. comp. Physiol.* **56** Suppl. **1** 1960 : 17-29 2 figs. 4 tabs.

- Braden, A. W. H. *see* Ashton.
- Bradshaw, G. V. R. (1). New Arizona locality for the dwarf shrew. *J. Mammal.* 42 : 96.
- Bradshaw, G. V. R. (2). Le cycle de reproduction de *Macrotus californicus* (Chiroptera, Phyllostomatidae). *Mammalia*, Paris 25 : 117-119. [English summary.]
- Bragg, A. N. [for King, O. M.] A note on opossum behaviour. *J. Mammal.* 42 : 397.
- Brakhage, G. K. *see* Martinson.
- Brandon, R. A. Observations of young keen bats. *J. Mammal.* 42 : 400-401.
- [Braude, G. L.] [On the morphological peculiarities of tonic and atonic skeleton muscles in mammals.] *Trud. Inst. Morf. Zhiv.* 29 1960 : 110-166 22 figs. 6 tabs. [In Russian.]
- Brauer, A. & Dusing, A. Sexual cycles and breeding seasons of the gray squirrel, *Sciurus carolinensis* Gmelin. *Trans. Ky. Acad. Sci.* 22 : 16-27 4 figs. 3 tabs.
- Braynes, S. N. & Novosylova, S. L. Elementary thought in apes. (Preliminary communication.) *Sovet. antrop. Mosk.* 3 1 1959 : 37-48 1 fig. [In Russian.]
- Bree, P. J. H. van (1). On a subfossil skull of *Mustela lutreola* (L.) (Mammalia, Carnivora), found at Vlaardingen, the Netherlands. *Zool. Anz.* 166 : 242-245 1 fig.
- Bree, P. J. H. van (2). A note on the date of molt in the stoat (*Mustela erminea*) from the Netherlands. *Säugetierk. Mitt.* 9 : 8-10 1 fig.
- Bree, P. J. H. van (3). On the remains of some Carnivora found in a prehistoric site at Vlaardingen, the Netherlands. *Beaufortia* 8 : 109-118 9 figs.
- Bresson, C. La myologie du tapir (*Tapirus indicus* L.). *Mammalia*, Paris 25 : 358-400 16 figs.
- Bridger, J. E. *see* Aitken.
- Bridges, W. (1). Haymakers from the Northwest—two mountain beavers. *Anim. Kingd.* 63 1960 : 208-210 1 fig.
- Bridges, W. (2). Two young snow leopards in the zoo. *Anim. Kingd.* 64 : 2-6 4 figs.
- Bridges, W. (3). The least weasel. *Anim. Kingd.* 64 : 45-46 2 figs.
- Brigham, J. H. Summer mortality of juvenile black-tailed deer in western Washington. *Murrelet* 35 1954 : 39-42 1 fig.
- Briney, S. R. & Wunder, C. C. Comparative study of effects of gravity on the growth of hamsters and mice. *Proc. Iowa Acad. Sci.* 67 1960 : 495-500 5 figs.
- Britz, W. E. *see* Cook.
- Broadbooks, H. E. (1). California ground squirrel invades Washington. *J. Mammal.* 41 : 257-258.
- Broadbooks, H. E. (2). The funnel eared bat in Sonora. *J. Mammal.* 42 : 403.
- Broadbooks, H. E. (3). Homing behaviour of deer mice and pocket mice. *J. Mammal.* 42 : 416-417 1 tab.
- Brock, E. M. *see* Howard.
- Brooklesby, D. W. A new disease of the eland. *Wild Life, Nairobi* 2 (4) 1960 : 19, 39.
- Brodkorb, P. Recently described birds and mammals from Cuban caves. *J. Paleont.* 35 : 633-635.
- Brooks, A. C. A study of the Thomson's gazelle (*Gazella thomsonii* Günther) in Tanganyika. I. Studies on the life-history and ecology of the Thomson's gazelle (*Gazella thomsonii* Günther) in Tanganyika pp. 1-75 2 figs. 15 pls. 3 tabs. II. Variation and subspeciation in Thomson's gazelle (*Gazella thomsonii* Günther) pp. 77-127 9 figs. 4 pls. 24 tabs. III. Notes in some aspects of growth, ageing and development in Thomson's gazelle, with comments on cranial abnormalities pp. 129-147 1 fig. 2 pls. 9 tabs. Colonial Research Pub. No. 25, London (H.M. Stationery Office) pp. i-vi 1-147.
- Brooks, F. P. Use of spider monkeys in the study of gastric secretion. *Science* 132 1960 : 1489.
- Brosselin, M. Observations sur le rat musqué aux environs de Rennes. *Penn. ar. Bed.* No. 23 1960 : 237-240 2 figs.
- Brosset, A. (1). Les mammifères du Maroc oriental. Leur répartition—Leur statut actuel. *Bull. Soc. Sci. Maroc.* 40 1960 : 243-263.
- Brosset, A. (2). Some notes on Blanford's, or the whitetailed wood rat [*Rattus blanfordi* (Thomas)] in western India. *J. Bomb. nat. Hist. Soc.* 58 : 241-248 1 fig. 1 pl. 2 tabs.
- Browman, L. G. Microphthalmia and optic blood supply in the rat. *J. Morph.* 109 : 37-55 3 pls.
- Brown, A. M. & Cook, M. J. Histocompatible colour mutant from CBA/Lab strain of mice. *Nature, Lond.* 189 : 1031 2 figs.
- Brown, L. N. (1). Excreted dyes used to determine movements of cottontail rabbits. *J. Wildl. Mgmt.* 25 : 199-202 2 figs. 1 tab.
- Brown, L. N. (2). *Sorex longirostris* in southwestern Missouri. *J. Mammal.* 42 : 527.
- Brown, L. N. & Conaway, C. H. Dye excretion as a method for determination of small mammal home ranges. *Amer. midl. Nat.* 66 : 128-137 1 fig. 3 tabs.
- Brown, M. C. *see* Warner.
- Brown, S. G. (1). Observations of pilot whales (*Globicephala*) in the north Atlantic Ocean. *Norsk Hvalfangsttid.* 50 : 225-254 1 fig 7 tabs.
- Brown, S. G. (2). Whale marks recovered in the Antarctic whaling season 1960/61. *Norsk Hvalfangsttid.* 50 : 407-410.
- Buchalczyk, A. *Pitymys subterraneus* (de Selys—Longchamps 1835) under laboratory conditions. *Acta Theriologica* 4 : 282-284.
- Buchalczyk, T. (1). Variabilität der Feldspitzmaus, *Crocidura leucodon* (Hermann 1780) in Ost-Polen. *Acta Theriologica.* 4 1960 : 159-174 1 fig. 6 tabs.
- Buchalczyk, T. (2). Einseitige Gebissanomalie bei *Neomys fodiens* Pennant 1771. *Acta Theriologica* 4 : 277-278 1 fig.
- Buchalczyk, T. & Raczyński, J. Taxonomischer Wert einiger Schädelmessungen inländischer Vertreter der Gattung *Sorex* Linnaeus 1758 und *Neomys* Kaup 1829. *Acta Theriologica* 5 : 115-124 4 figs. 4 tabs. [Polish, German summary.]
- Buckner, C. H. The pale big brown bat in Manitoba. *J. Mammal.* 42 : 529.
- Budker, P. Les migrations des grands Cétacés. *C.R. Soc. Biogéogr.* 37 330 : 21-24 1 fig.
- Buechner, H. K. (1). Unilateral implantation in the Uganda kob. *Nature, Lond.* 190 : 738-739 1 tab.

- Buechner, H. K. (2). Regulation of numbers of pronghorn antelope in relation to land use. *Terre et la Vie* 108 : 266-285 1 pl. 5 tabs.
- Buechner, H. K., Harthoorn, A. M. & Lock, J. A. (1). Recent advances in field immobilization of large animals with drugs. *Trans. N. Amer. Wildl. Conf.* 25 1960 : 415-422 1 tab.
- Buechner, H. K., Harthoorn, A. M. & Lock, J. A. (2). L'immobilisation des animaux sauvages, technique auxiliaire de leur exploitation rationnelle et de leur contrôle. *Terre et la Vie* 108 : 361-367.
- Buettner-Janusch, J. Transferrin differences in chimpanzee sera. *Nature, Lond.* 192 : 632-633 1 fig. 1 tab.
- Buettner-Janusch, J., Twichell, J. B. & Wong, B. Y.-S. Multiple haemoglobins and transferrins in a macaque sibship. *Nature, Lond.* 192 : 948-950 4 figs. 1 tab.
- Buisson, M. du see Signoret.
- Bujalska, G. Fälle von Asymmetrie des Beckens und des Kreuzbeines beim *Lepus europaeus* Pallas 1778. *Acta Theriologica* 4 : 279-281 2 pls.
- Bullard, R. W., David, G. & Nichols, C. T. The mechanisms of hypoxic tolerance in hibernating and non-hibernating mammals. *Bull. Mus. comp. Zool. Harv.* 124 1960 : 321-335 5 figs. 1 tab.
- Bulmer, D. & Dickson, A. D. The fibrinoid capsule of the rat placenta and the disappearance of the decidua. *J. Anat., Lond.* 95 : 300-310 2 pls.
- Bulmer, D. see Dickson.
- Bunker, L. E. Hepatic fusion, a new gene in linkage group I of the mouse. *J. Hered.* 50 1959 : 40-44 3 figs. 4 tabs.
- Buranamara, P. see Rife.
- [Burchak-Abramovich, N. I.] (1). [Find of fossil ox (*Bubalus* sp.) in the Caucasus.] *Izvest. Akad. Nauk. Azerb. SSR.* No. 2 1952 : 63-76. [N.V.] [In Russian.]
- [Burchak-Abramovich, N. I.] (2). [A primitive ox (*Bos mastanadei* mihi sp. nova) from the Quaternary fauna of Apsheronak.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 5, 1952 : 181-202. [N.V.] [In Russian.]
- [Burchak-Abramovich, N. I.] (3). [Study of the material of long-shafted bones of the mammals of Binagadinsk.] *In* [Location of Quaternary Fauna and Flora at Binagadinsk. 3.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 6 1953 : 210-277 37 figs. 7 tabs. [In Russian.]
- [Burchak-Abramovich, N. I.] (4). [Indications of injury in the skeletons of predatory mammals of the Binagadinsk fossil deposit.] *In* [Location of Quaternary Fauna and Flora at Binagadinsk. 3.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 6 1953 : 278-301 25 figs. [In Russian.]
- [Burchak-Abramovich, N. I.] (5). [Eldarsk Palaeontological Reconnaissance Expedition.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 8 1954 : 14-49 6 figs. 10 tabs. [In Russian.]
- [Burchak-Abramovich, N. I.] (6). [Fossil giraffe (*Achtharia borissiakii* Alex.) from the Hipparion fauna of Eldarsk.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 8 1954 : 50-77, 28 figs. 8 tabs. [In Russian.]
- [Burchak-Abramovich, N. I.] (7). [Fossil oxen of the Old World.] *Baku Akad. Nauk. Azerb. SSR.* 1957 pp. 1-263 131 figs. 11 pls. 14 tabs. [In Russian.]
- [Burchak-Abramovich, N. I.] (8). [Fossil beaver-trogonthere from Caucasus.] *Vertebrata Palasiatica* 1961 : 150-154 1 fig. [Chinese, Russian summary.]
- [Burchak-Abramovich, N. I.] (9). [A study of the Caucasian cave bear.] *Cas. moravsk. Mus.* 46 : 67-80 1 pl. 1 tab. [Russian, German summary.]
- [Burchak-Abramovich, N. I. & Dzhatarov, R. D.] (1). [Material and analytical account of the hoofed mammals of the Quaternary fauna of Binagadinsk.] *In* [Location of Quaternary Fauna and Flora at Binagadinsk. 3.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 6 1953 : 157-209 22 figs. 18 tabs. [In Russian.]
- [Burchak-Abramovich, N. I. & Dzhatarov, R. D.] (2). [Binagadinsk localities in the fauna and flora of the Apsheronak Peninsula.] *In* [Location of Quaternary Fauna and Flora at Binagadinsk. 4.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 10 1955 : 89-146 9 figs. [In Russian.]
- [Burchak-Abramovich, N. I. & Namiev, V. I.] [Bison of Northern Ossetia.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR.* No. 8 1954 : 78-187 39 figs. 7 tabs. [In Russian.]
- Burekhardt, D. (1). Great horns and high Alps. *Nat. Hist. N.Y.* 70 2 : 8-15 illustr.
- Burekhardt, D. (2). Aus dem Leben des Steinbockes. *Schw. Natursch.* 27 : 10-14 2 figs. [French summary.]
- Burekhardt, D., Kuster A. & Schloeth, R. Recherches Suisses sur les Ongules-Gibier. *Terre et la Vie* 108 : 101-109.
- Burekhardt, D. see Schloeth.
- Burgess, P. F. Wild life conservation in North Borneo. Nature Conservation in Western Malaysia, 1961. *Nat. J. 21st Anniv. Spec. Issue* : 143-151 2 pls.
- Bürgli, H. Biostratigraphie de la Sabana de Bogota y sus alrededores. *Bol. geol. Colombia* 5 2 1958 : 113-147 19 pls. map. [English summary.]
- Burkill, H. M. Protection of wild life on Singapore Island. Nature Conservation in Western Malaysia 1961. *Malay. Nat. J. 21st Anniv. Spec. Issue* : 152-164 1 fig. 1 pl.
- Burki, W. Wachserde Eierstockfollikel mit mehreren Oozyten. *Anat. Anz.* 109 : 164-169 3 figs.
- Burt, A. M. & Wood, A. E. Variants among Middle Oligocene rodents and lagomorphs. *J. Paleont.* 34 1960 : 957-960 2 figs. 1 tab.
- Burt, W. H. (1). A fauna from an Indian site near Redington, Arizona. *J. Mammal.* 42 : 115-116 1 tab.
- Burt, W. H. (2). Some effects of Volcán Parícutin on vertebrates. *Occ. Pap. Mus. Zool. Univ. Mich.* No. 620 : 1-24.
- Burt, W. H. & Sturton, R. A. The mammals of El Salvador. *Misc. Pub. Mus. Zool. Univ. Michigan* No. 117 : 1-69 2 figs. 1 tab.
- Buznel, R. G. see Signoret.
- Buss, J. O. Some observations on food habits and behaviour of the African elephant. *J. Wildl. Mgmt.* 25 : 131-148 7 figs. 2 tabs.
- Busser, L. see Gouin.
- Butterworth, B. B. The breeding of *Dipodomys deserti* in the laboratory. *J. Mammal.* 42 : 413-414.

Byon, S. Die Ausmündungszahl der Schweißdrüsen in der Augenbrauenhaut Beim Menschen und Affen. *Okajimas Folia Anat. Jap.* 37 : 99-104.

Cabrier da Silva, H. R. B. de. Prospeção parasitológica em Timor. *Estud. Ens. Docum. Jta. Inv. Lisboa* No. 76 1960 : 1-117 5 maps.

Cadeo, G. C. Risultati degli ultimi 15 anni di ricerche archeologiche, paleontologiche e paleontologiche nelle grotte Lombarde (Anni 1946-1960). *Natura, Milano* 52 : 20-28.

Cağlar, M. see Kahrann.

Calaby, J. H. & Ratcliffe, F. N. Australia's threatened mammals. *Proc. Int. Un. conserv. Nat. Res.* 1960 1960 : 121-126.

Calaby, J. H., Gooding, C. D. & Tomlinson, A. R. Myxomatosis in Western Australia. *C.S.I.R.O. Wildl. Res. Melb.* 5 1960 : 89-101 1 fig. 1 tab.

Calaby, J. H. see Griffiths.

Caldwell, D. K. The harbor seal in South Carolina. *J. Mammal.* 42 : 425.

Calhoun, M. L. see Strickland.

Callegari, E. Osservazioni sulla superficie secernente della mammella in *Bos taurus*. *Atti Accad. Sci. Bologna R.C.* (11) 6 1959 : 152-155.

Callender, E. N. The flying lemur. *Malay. Nat. J.* 15 : 71.

Camacho, J. H. & Porta, J. de. Un nuevo bóvido pleistocénico de Colombia: *Colombibos atactodontus*. *Bol. geol. Univ. indust. Santander* No. 5 1960 : 41-52 1 pl. 2 tabs. [English summary.]

Camain, R. & Quenum, A. Le problème de l'hypertrophie compensatrice de la corticosurrénale : étude chez *Cricetomys gambianus* mâle. *C.R. Soc. Biol. Paris* 155 : 585-591 3 figs. 2 tabs.

Camain, R., Quenum, A., Kerrest, J. & Goueffon, S. Considérations sur l'estomac de *Cricetomys gambianus*. *C.R. Soc. Biol. Paris* 154 : 1578-1579.

Camerlynck, P. see Massayeff.

Cameron, A. W. Les mammifères du Canada. *Ottawa (National Museum of Canada)* 1960 : pp. 1-89 text illust.

Cameron, A. W. see MacLeod.

Camp, C. L. & Allison, J. H. Bibliography of fossil vertebrates 1949-1953. *Mem. geol. Soc. Amer.* 84 1961 : 1-532.

Candaale, G. Le réseau artériel coronarien du gorille. *Bull. Inst. roy. Sci. nat. Belg.* 36 (48) 1960 : 1-8 4 figs.

Capurro S., L. F. & Silva G., F. Estudios cromatográficos y electroforéticos en camelidos sudamericanos. *Invest. zool. chil.* 6 1960 : 49 [bis]-64 10 figs. [English summary.]

Cardot, J. see Jullien.

Carli, L. de. see Hamerton.

Carlisle, R. W., Palmer, R. F. & Skillen, S. Natterer's bat, *Myotis nattereri* Kuhl, Castlecoole, Co. Fermanagh. *Irish nat. J.* 13 1960 : 121.

Carson, J. D. Epiphyseal cartilage as an age indicator in fox and gray squirrels. *J. Wildl. Mgmt.* 25 : 90-93 1 fig. 1 tab.

Carter, D. C. & Davis, W. B. *Tadarida aurispinosa* (Peale) (Chiroptera: Molossidae) in North America. *Proc. biol. Soc. Wash.* 74 : 161-165 2 tabs.

Carter, T. C. & Lyon, M. F. An attempt to estimate the induction by X-rays of recessive lethal and visible mutation in mice. *Genet. Res. Camb.* 2 : 296-305 1 fig. 7 tabs.

Carter, T. C., Lyon, M. F. & Phillips, R. J. S. The genetic sensitivity to X-rays of mouse foetal gonads. *Genet. Res. Camb.* 1 1960 : 351-355 3 tabs.

Carvalho, C. T. de (1). Sobre alguns mamíferos do sudeste do Pará. *Arch. Zool. S. Paulo* 11 1958 [1960] : 121-132 1 fig.

Carvalho, C. T. de (2). Das visitas de morcegos às flores (Mammalia, Chiroptera). *An. Acad. bras. Cienc.* 32 1960 : 369-377 4 figs. 4 tabs. [English summary.]

Casamiquela, R. M. El hallazgo del primer elenco (Icnológico) Jurásico de vertebrados terrestres de Latinoamérica (Noticia). *Rev. Asoc. geol. argent.* 15 : 5-14 2 figs. 1 pl. [English summary.]

Casebeer, R. L. Habitat of the Jackson Hole elk as a part of multiple resource planning, management and use. *Trans. N. Amer. Wildl. Conf. No.* 26 : 436-447 2 figs.

Casteel, D. A. A white cottontail rabbit. *J. Mammal.* 42 : 541.

Casteel, D. A. see Lord.

Castellanos, A. (1). Nuevos géneros de Clamiterio y de Gervó y una nueva especie de *Platiphorus*. *Ameghiniana* 1 3 1957 : 5-14 4 figs.

Castellanos, A. (2). Restos de *Boreostracocon coronandus* n. sp. descubiertos en la Provincia de Santa Fé (Argentina). *Acta geol. Lilloana* 2 1958 : 135-189 illus. [N.V.]

Castle, W. E. & Singleton, W. R. The Palomino horse. *Genetics* 46 1143-1150 2 tabs.

Cattlett, R. H. (1). An evaluation of methods for measuring fighting behaviour with special reference to *Mus musculus*. *Anim. Behav.* 9 : 8-10 1 tab.

Cattlett, R. H. (2). Unusual abundance of *Peromyscus* at Gothic, Colorado. *J. Mammal.* 42 : 415 1 tab.

Cattanach, B. M. XXY mice. *Genet. Res. Camb.* 2 : 156-158.

Cattol, N. Una especie extinguida de *Tapirus* Brisson (*Tapirus rioplatensis* nov. sp.). *Ameghiniana* 1 3 1957 : 15-21 1 fig. 1 pl.

Cauna, N. see Leaming.

Cave, A. J. E. (1). The retrolingual gland of the elephant. *Proc. zool. Soc. Lond.* 136 : 293-300 3 figs. 1 pl.

Cave, A. J. E. (2). The frontal sinus of the gorilla. *Proc. zool. Soc. Lond.* 136 : 359-373 6 figs. 1 pl.

Cecio, A. see Rosati.

Center, E. M. "Dorsal excrescences" in the mouse—genetic or non-genetic? *J. Hered.* 51 1960 : 21-26 5 figs.

Chabarova, A. J. Über die rezeptorischen Felder im Herzen. *Z. mikr. anat. Forsch.* 67 : 434-440 3 figs.

Chai, C. K. (1). Life span in inbred and hybrid mice. *J. Hered.* 50 1960 : 203-208 5 figs.

Chai, C. K. (2). Analysis of quantitative inheritance of body size in mice. IV. An attempt to isolate polygenes. *Genet. Res. Camb.* 2 : 25-32 3 figs. 2 tabs.

Chakravarti, D. K. A geological, palaeontological and phylogenetic study of the Elephantoidae of India, Pakistan and Burma: Part I. Gomphotheriidae. *J. Pal. Soc. India* 2 1957 : 83-94.

- Chambers, W. W. *see* Sprague.
- Chang, M. C. Fertilization of domestic rabbit (*Oryctolagus cuniculus*) ova by cottontail rabbit (*Sylvilagus transitionalis*) sperm. *J. exp. Zool.* **144** 1960: 1-10 2 pls. 2 tabs.
- Chang, Y. P. Pleistocene mammals from Shaochin, Kwangtung. *Paleovertebrata et Paleoanthropologia* **1** (3) 1959: 141-143. [In Chinese.] [N.V.]
- Chang, Y. P. *see* Chiu.
- Chang, Y. P. *see* Chow.
- Chapman, D. B. *see* Hummel.
- Chapman, D. G. Population dynamics of the Alaska fur seal herd. *Trans. N. Amer. Wildl. Conf.* No. 26: 356-369 1 fig. 4 tabs.
- Chapsky, K. K. (1). Contemporary conditions and the problems of the systematics of pinniped. *Trud. Sovesh. Ichtiol. Kom.* No. 12: 138-149. [In Russian.]
- Chapsky, K. K. (2). Some ecological substantiation of the seasonal dynamics of the area of the White Sea population of Greenland Seal. *Trud. Sovesh. Ichtiol. Kom.* No. 12: 150-163. [In Russian.]
- Chapuis, M. Evolution and protection of the wild life of Morocco. *Afr. Wild Life* **15**: 107-112 4 figs.
- Chaput, G. Quelques observations sur la sablière de Kemer Burgas. *Nouv. Arch. Mus. Hist. nat. Lyon* No. 6: 1.
- Charegaonkar, P. M. & Rindani, T. H. Effect of age, sex and gonadal hormone on brain tissue respiration of albino rats. *Proc. Indian Acad. Sci.* **53B**: 143-148 4 tabs.
- [Charlemagne, N. V.]. [Animals of the Ukraine. Kiev 1920] [N.V.] [omitted from previous Records.] [In Ukrainian.]
- Charles, D. R., Tihen, J. A., Otis, E. M. & Grobman, A. B. Genetic effects of chronic X-irradiation exposure in mice. *Genetics* **46**: 5-8.
- Charnot, Y. Repercussion de la deshydratation sur la biochimie et l'endocrinologie du dromadaire. *Trav. Inst. Sci. Cherifien Ser. Zool.* No. 20 1960: i-xii 1-167 9 pls. 13 tabs.
- Chase, H. B. & Mann, S. J. Phenogenetic aspects of some hair and pigment mutants. *J. cell. comp. Physiol.* **56** Suppl. 1 1960: 103-111 1 tab.
- Chaudhary, N. C. & Bhatnagar, D. S. Effect of exposure to sun and exercise on heat tolerance coefficient in Murrah buffalo calves. *Nature, Lond.* **189**: 844-845 2 tabs.
- Chauvier, G. *see* Nouvel.
- Chew, R. M. Water metabolism of desert-inhabiting vertebrates. *Biol. Rev.* **36**: 1-31 2 figs. 2 tabs. [Mammals p. 20.]
- Chianelli, B. Chromosomes of the orang-utan (*Pongo pygmaeus*). *Nature, Lond.* **192**: 285 1 fig. 2 tabs.
- Chiasson, R. B. A Pleistocene record of *Zalophus* from Mexico. *J. Mammal.* **42**: 547-549 1 pl.
- Chin, N. K. *see* Barker.
- Chiodi, V. Osservazioni sull'apparato di conduzione nel cuore di felidi. *R.C. Accad. Bologna Cl. Sc. Fis.* (11) 2 1955: 25-31 7 figs.
- Chiodi, V. & Bortolami, R. Osservazioni sulle strutture profonde del cuore di alcuni primati. *Atti Accad. Sci. Bologna R.C.* (11) **3** 1956: 19-27 7 figs.
- Chipman, R. K. *see* Negus.
- [Chittleborough, R. G.] (1). Report on Australian whaling 1960. *Norsk Hvalfangsttid* **50**: 254-255.
- [Chittleborough, R. G.] (2). Australian catches of humpback whales 1960. *Norsk Hvalfangsttid* **50**: 452-483 10 figs. 17 tabs.
- Chiu, C. L., Chang, Y. P. & Tuhg, Y. S. Pleistocene mammalian fossils from Chinkiang District, W. Hupei. *Vertebrata Palasiatica* 1961: 155-159 1 pl.
- Chopra, S. R. K. The angle of pelvic torsion in the primates. *Z. morph. anthrop.* **51**: 268-274 3 figs. 2 tabs.
- Chou, J. T. Y. A cytological and histochemical study of the stria vascularis of the guinea-pig's ear. *Quart. J. micr. Sci.* **102**: 75-82 2 figs. 1 tab.
- Chou, P. H. *see* Chow.
- Chow, B. S. Note on a pathologic mandible of woolly rhinoceros from Siki, Ningxia. *Vertebrata Palasiatica* 1961: 43-48 2 pls. [Chinese, English summary.]
- Chow, B. S. *see* Kahlke.
- Chow, M. (1). Part I. General considerations. In Chow, M. & others. Pleistocene mammalian fossils from the Northeastern Provinces. *Mem. Inst. Vert. Pal. Acad. Sinica* **3** 1959: 1-12. [Chinese, English summary.]
- Chow, M. (2). Primates, Rodentia, Lagomorpha and Carnivora. In Chow, M. & others. Pleistocene mammalian fossils from the Northeastern Provinces. *Mem. Inst. Vert. Pal. Acad. Sinica* **3** 1959: 13-22 4 figs. 3 pls.
- Chow, M. (3). Occurrence of *Enhydriodon* at Yuanmo, Yunnan. *Vertebrata Palasiatica* 1961: 164-167 1 fig. [Chinese, English summary.]
- Chow, M. & Chang, Y. P. Proboscidea. In Chow, M. & others. Pleistocene mammalian fossils from the Northeastern Provinces. *Mem. Inst. Vert. Pal. Acad. Sinica* **3** 1959: 22-34 4 figs. 12 pls. [Chinese, English summary.]
- Chow, M., Chang, Y. P., Hu, C. K., Liu, H. I., Hsu, Y. H., Chou, P. H., Lee, Y. C. & Hsien, H. H. Pleistocene mammalian fossils from the Northeastern Provinces. *Mem. Inst. Vert. Pal. Acad. Sinica* **3** 1959: 1-82 15 figs. 45 pls. [Chinese, English summary.]
- Chow, M. C. (1). A new tarsoid primate from the Lushi Eocene, Honan. *Vertebrata Palasiatica* 1961: 1-5 pl. [Chinese and English.]
- Chow, M. C. (2). The first occurrence of fossil hippopotamus in China. *Vertebrata Palasiatica* 1961: 39-40 1 fig. [Chinese, English summary.]
- Chowdhury, A. K. & Das, D. Acid secreting zones in the rabbit stomach. *Sci. & Cult.* **27**: 306-308 3 figs. 1 tab.
- Chowdhury, D. R. & Sadhu, D. P. Rate of evaporation from different regions of the skin of Indian zebu cattle. *Nature, Lond.* **189**: 491.
- Christian, G. The future of England's deer. *New Scientist* **12**: 628-630 5 figs.
- Christian, J. J. Control of population growth in rodents by interplay between population density and endocrine physiology. *Wildl. Dis. & Abstr. (on Microcard)* No. 2 1959: 38 pp.
- Christian, J. J. *see* Snyder.
- Christiansen, B. Fauna north of the Arctic Circle. *Tromsø Mus. Skr.* **8** 1960: 73-99 3 figs.

- Christov, L.** Untersuchungen über die Säugetiere im Gebiet des "Srebarna"-Sees im Bezirk Silistra. Izv. zool. Inst. Bulg. Akad. Nauk. **10** : 345-353 4 tabs. [Russian, German summary.]
- Chudoba, S. & Humiński, S.** Wrocław-Neighbourhood territories irrigated with sewage waters as biotopes of Insectivora and Rodentia. Przegl. zool. **5** : 132-137 4 figs. 1 tab. [Polish, English summary.]
- Chu Tsing** see Stroganova.
- Clanton, C. W. & Johnson, M. L. (1).** White tailed jack rabbit in Washington. Murrelet **35** 1954 : 15.
- Clanton, C. W. & Johnson, M. L. (2).** Beechey's ground squirrel Washington State. Murrelet **35** 1954 : 15.
- Clanton, C. W.** see Johnson.
- Claridge, G. G.** Seal tracks in the Taylor Dry Valley. Nature, Lond. **190** : 559.
- Clark, G. M., Locke, L. N. & Schmid, F. C.** Contact dermatitis incurred from cottontail stomach contents. J. Wildl. Mgmt. **24** 1960 : 94.
- Clark, J. D.** Sites yielding hominid remains in Bed I, Olduvai Gorge. Nature, Lond. **189** : 903-904.
- Cleffmann, G.** Über den Einfluss des Milieus in situ und in vitro auf die Manifestierung der Agutizeichnung. Verh. dtsch. zool. Ges. **1960** (1961) : 263-268 6 figs.
- Clemens, W. A.** A late cretaceous mammal from Dragon Canyon, Utah. J. Paleont. **35** : 578-579 1 fig.
- Clemens, W. A.** see Kermack.
- Clezy, J. K. A., Dennis, B. J. & Kerr, D. I. B.** A degeneration study of the somaesthetic afferent systems in the marsupial phalanger, *Trichosurus vulpecula*. Aust. J. exp. Biol. med. Sci. **39** : 19-27 20 figs.
- Cochran, G. A. & Stains, J. H.** Deposition and decomposition of fecal pellets by cottontails. J. Wildl. Mgmt. **25** : 432-435 4 figs.
- Cockrill, W. R.** Pathology of the Cetacea. A veterinary study on whales—Part II. Brit. vet. J. **116** 1960 : 175-190 5 figs.
- Cockrum, E. L.** Southern yellow bat from Arizona. J. Mammal. **42** : 97.
- Cohen, B. L.** Genetics of plasma transferrin in the mouse. Genet. Res. Camb. **1** 1960 : 431-438 3 pls. 4 tabs.
- Cohen, B. L. & Shreffler, D. C.** A revised nomenclature for the mouse transferrin locus. Genet. Res. Camb. **2** : 306-308 2 tabs.
- Cohen, J.** The transplantation of individual rat and guinea-pig whisker papillae. J. Embryol. exp. Morph. **9** : 117-127 1 fig. 2 pls.
- Colacicchi, R.** *Squalodon bariensis* nel calcare bituminoso miocenico di Ragusa (Sicilia). Bol. Soc. Paleont. Italiana **1** 1960 : 17-32 2 pls. [English summary.]
- Colchester, T. C.** Game and climatic changes in the Sahara. Wild Life, Nairobi **2** (4) 1960 : 27-29 2 figs.
- Cole, A. S.** Soluble material in the gastro-intestinal tract of rats under normal feeding conditions. Nature, Lond. **191** : 502-503 1 tab.
- Cole, S.** How fast did man evolve. New Scientist. **11** : 208-210 3 figs. 2 tabs.
- Coleman, E. M.** see Barnett.
- Collins, W. B. (1).** Wild Life conservation in Ghana (Part I). Afr. Wild Life **15** : 205-212 6 figs.
- Collins, W. B. (2).** Wild life conservation in Ghana (Part II). Afr. Wild Life **15** : 281-287.
- Comfort, A.** Studies on the longevity and mortality of English thoroughbred horses. In **Wolstenholme, G. E. W. & O'Connor, M.**, Ciba Foundation colloquia on ageing, 5. The lifespan of animals. London (J. & A. Churchill Ltd.) 1959 : 35-56 3 figs. 6 tabs.
- Commissaris, L. R.** The Mexican big-eared bat in Arizona. J. Mammal. **42** : 61-65 1 fig.
- Conaway, C. H., Baskett, T. S. & Toll, J. E.** Embryo resorption in the swamp rabbit. J. Wildl. Mgmt. **24** 1960 : 197-202 3 tabs.
- Conaway, C. H.** see Brown.
- Conaway, C. H.** see Wight.
- Condle, K. C.** see Stokes.
- Constant, P. (1).** Étude systématique du *Miniopere* de Schreibers. Sous le Plancher No. 2, 1957 : 30-34.
- Constant, P. (2).** Chauves-souris d'Europe occidentale—indice digital. Sous le Plancher No. 1 1960 : 1-4.
- Constantine, D. G. (1).** Locality records and notes on western bats. J. Mammal. **42** : 404-405.
- Constantine, D. G. (2).** Gestation period in the spotted skunk. J. Mammal. **42** : 421-423.
- Constantine, D. G. (3).** Bats and rabies . . . a startling mammal-virus relationship. Zoonoses **34** (11) : 3-7 6 figs.
- Cook, E. F.** see Davis.
- Cook, J. E., Finig, J., Mikach, E. D. & Britz, W. E.** The chimpanzee, procurement, standardization, and use in biomedical research. J. Amer. vet. med. Ass. **138** : 366-369.
- Cook, M. J. & Vleck, A.** Sex-ratio in mice. Nature, Lond. **191** : 89 1 tab.
- Cook, M. J.** see Brown.
- Cook, R. S. & Hale, J. B.** Deer on the Bad River Indian reserve. Trans. N. Amer. Wildl. Conf. No. 26 : 448-459 7 tabs.
- Cooke, H. B. S.** Further revision of the fossil Elephantidae of Southern Africa. Palaeont. africana **7** : 46-58 9 figs. 1 tab.
- Cooper, E. R. A.** The vertebral venous plexus. Acta anat. **42** (4) 1960 : 333-351 26 figs.
- Copenhaver, R. M.** see Tansey.
- Coppens, Y.** Découverte d'un australopithecine dans le Villafranchien du Tchad. C.R. Acad. Sci. Paris **252** : 3851-3852.
- Corbet, G. B.** Origin of the British insular races of small mammals and of the "Lusitanian" fauna. Nature, Lond. **191** : 1037-1040.
- Cornwall, I. W. & Howard, M. M.** The making of man. London (Phoenix House, Ltd.) 1960 pp. 1-63 text illustr.
- Corte, F. della.** Osservazioni istologiche sull'adenopofisi di embrioni, di neonati e di soggetti giovani di gatto domestico. Monit. zool. Ital. Suppl. **68** 1960 : 295-299.
- Cortner, G. L.** see Jones.

- Costin, A. B. & Moore, D. M. The effects of rabbit grazing on the grasslands of Macquarie Island. *J. Ecol.* 48 1960 : 729-732 4 pls. 1 tab.
- Cottam, G. *see* Beals.
- Coulson, J. C. & Hickling, G. (1). The grey seals of the Farne Islands. *Trans. nat. Hist. Soc. Northumb.* N.S. 13 1960 : 196-214 8 tabs.
- Coulson, J. C. & Hickling, G. (2). Variation in the secondary sex-ratio of the gray seal *Halichoerus grypus* (Fab.) during the breeding season. *Nature, Lond.* 190 : 281 1 tab.
- Courtenay-Latimer, M. The black springbuck. *Afr. Wild Life* 15 : 15-18 3 figs.
- Couturier, M. A. J. (1). Statut actuel des représentants du genre *Capra* dans le bassin Méditerranéen. *Terre et la Vie* 106 Suppl. 12-19.
- Couturier, M. A. J. (2). Ecologie et protection du bouquetin (*Capra aegagrus ibex* L.) et du chamois (*Rupicapra rupicapra rupicapra* (L.)) dans les Alpes. *Terre et la Vie* 108 : 54-73.
- Couturier, M. A. J. (3). Vie sexuelle et reproduction chez le bouquetin des Alpes (*Capra aegagrus ibex* L.) (1758). *Act. Congr. Ass. franç.* 79 : 142.
- Cowan, I. McT. & Geist, V. Aggressive behaviour in deer of the genus *Odocoileus*. *J. Mammal.* 42 : 522-426 3 figs.
- Cowan, I. McT. *see* Currier.
- Cowan, I. McT. *see* Wood.
- Cowan, R. L. *see* Long.
- Cowey, A. *see* Weiskrantz.
- Cowgill, G. Comments. [On Howell, F. C. European and northwest African Middle Pleistocene hominids. *Curr. Anthropol.* 1 1960 : 192-232.] *Curr. Anthropol.* 2 : 118.
- Craig, D. *see* Dart.
- Craig, M. *see* Barrowman.
- Craighead, J. J. & Stockstad, D. S. Color marker for big game. *J. Wildl. Mgmt.* 24 (4) 1960 : 435-438 2 figs.
- Craighead, J. J., Hornocker, M., Woodgerd, W. & Craighead, F. C. Trapping, immobilizing and color-marking grizzly bears. *Trans. N. Amer. Wildl. Conf.* 25 1960 : 347-363 4 tabs.
- Cranbrook, Earl of. Use of the thumb to support a whiskered bat (*Myotis myotis* Kuhl) at roost. *Proc. zool. Soc. Lond.* 137 : 633-634.
- Cranbrook, Earl of & Crowcroft, P. Small mammals from Herm Island. *J. Linn. Soc. Lond. (Zool.)* 44 (298) : 365-368 2 tabs.
- Crary, D. D. & Sawin, P. B. Inheritance and hair morphology of the "wuzzy" mutation in the rabbit. *J. Hered.* 50 1959 : 31-34 4 figs. 1 tab.
- Crawford, H. S. *see* Halls.
- Creed, R. F. S. Observations on reproduction in the wild red fox (*Vulpes vulpes*). An account with special reference to the occurrence of fox-dog crosses. *Brit. vet. J.* 116 1960 : 419-426 2 figs. 2 pls.
- Crespin, I. Catalogue of type and figured specimens in the Commonwealth Palaeontological Collection, Canberra. *Rep. Aust. Bur. Min. Res. Geol. geophys.* 54 1960 : 1-92.
- Crespo, J. A. Hallazgo del pichi ciego (*Chlamyphorus truncatus* Harl.) en la Provincia de Rio Negro. *Neotropica* 6 1960 : 94.
- Crouzel, F. *see* Bergougnoux.
- Crowcroft, P. & Rowe, F. P. The weights of wild house mice (*Mus musculus* L.) living in confined colonies. *Proc. zool. Soc. Lond.* 136 (2) 1961 : 177-185 2 figs. 2 tabs.
- Crowcroft, P. & Jeffers, J. N. R. Variability in the behaviour of wild house mice (*Mus musculus* L.) towards live traps. *Proc. zool. Soc. Lond.* 137 : 573-582 9 tabs.
- Crowcroft, P. *see* Cranbrook.
- Crusafont-Pairo, M. Trouville en Espagne du plus ancien Procyonidé d'Eurasie. *Ann. Paléont.* 45 1959 : 125-140 4 figs.
- Crusafont-Pairo, M. & Hürseler, J. Les pongidées fossiles d'Espagne. *C.R. Acad. Sci. Paris* 252 : 582-584.
- Crusafont Pairo, M. *see* Hernández-Pacheco.
- Crusafont Pairo, M. *see* Koenigswald.
- Crusafont Pairo, M. *see* Santonja.
- Crusz, H. Dugongs—a zoological romance. *Loris* 8 1960 : 300-302 1 fig.
- Currey, J. D. Differences in the blood supply of bone of different histological types. *Quart. J. micr. Sci.* 101 1960 : 351-370 9 figs.
- Currier, A., Kitts, W. D. & Cowan, I. McT. Cellulose digestion in the beaver (*Castor canadensis*). *Canad. J. Zool.* 38 1960 : 1109-1116 6 tabs.
- Curry-Lindahl, K. (1). A note on the moose in Sweden. *Terre et la Vie* 108 : 110-112.
- Curry-Lindahl, K. (2). The Norway lemming (*Lemmus lemmus*) in Sweden during the peak year 1960. *Fauna och Flora* 56 : 1-27 2 figs. map. [Swedish, English summary.]
- Curtis, G. H. *see* Leakey.
- Czechowicz, K. *see* Zarzycki.
- Czyżewska, T. (1). Nouvelle espèce de cervidé du genre *Cervoceros* Khomenko de la brèche Pliocène de Weze près de Działosyn. *Acta palaeont. polon.* 5 1960 : 283-318 6 figs. 4 pls. 12 tabs. [Polish, French summary.]
- Czyżewska, T. (2). *Cervus* (*Rusa*) sp. de la brèche osseuse Pliocène de Weze près de Działosyn. *Acta palaeont. polon.* 4 1960 : 389-430 7 figs. 5 pls. 13 tabs. [Polish, French summary.]
- Da Cunha, A. X. On the occurrence of the beaver (*Castor fiber* L.) in the mammalogical fauna of the Bronze Age castrum of Vila Nova de S. Pedro. *Mem. Mus. zool. Univ. Coimbra* No. 270 : 1-4 1 pl. [Portuguese, English summary.]
- Dagg, A. J. Elementary ecology of the Kruger National Park antelope. *Afr. Wild Life* 15 : 113-115 2 figs.
- Dahlberg, J. A reverse mutation in the house mouse. *J. Hered.* 50 1960 : 248-252.
- Dajoz, R. Le grands mammifères du Parc Albert. *Nature, Paris* No. 3311 : 117-127 14 figs. 1 tab.
- Dalke, P. D. *see* McConnell.
- Dalquest, W. W. (1). *Sylvilagus cunicularius* in the Pleistocene of Mexico. *J. Mammal.* 42 : 408-409.

- Dalquest, W. W. (2).** A record of the giant bison (*Bison latifrons*) from Cooke County, Texas. *Texas J. Sci.* 13 : 41-44.
- Daniel, T. W.** Rodent population of the spruce-fir type of Logan Canyon. *Proc. Utah. Acad. Sci.* 32 1955 : 35-36.
- Daniilova, E. I. & Svistun, V. I.** Oh a find of human fossil bones in alluvial deposits near the Dnieprodzerzhinsk water power station. *Dopov. Akad. Nauk. Ukr. R.S.R.* No. 5 : 669-673 3 figs.
- [Danilova, L. V.]** [On the problem of the development of the posterior extremity in the embryo of *Bos taurus*.] *Trud. Inst. Morf. Zhiv.* 29 1960 : 34-74 23 figs. [In Russian.]
- Danneberger, E. A.** Osteologische Untersuchung der Tierknochenreste aus der Grabung 1952 im Pfahlbau Burgäschisee-Stüd. *Mitt. naturf. Ges. Bern. N.F.* 18 1960 : 1-34 1 fig.
- Dart, R. A. (1).** The second adolescent (female) ilium of *Australopithecus prometheus*. *J. Pal. Soc. India* 2 1957 : 73-82 2 figs.
- Dart, R. A. (2).** The Kisoro pattern of mountain gorilla preservation. *Curr. anthrop.* 2 : 510-511.
- Dart, R. A. (3).** The place of antelope cannon-bones (or metapodials) in australopithecine economy. *Z. wiss. Zool.* 165 : 108-122 12 figs.
- Dart, R. A. (4).** Further information about how *Australopithecus* made bone tools and utensils. *S. Afr. J. Sci.* 57 : 127-134 4 figs.
- Dart, R. A. (5).** An australopithecine scoop made from a right australopithecine upper arm bone. *Nature, Lond.* 191 : 372-373 2 figs.
- Dart, R. A. & Craig, D.** Adventures with the missing link. London (Hamish Hamilton) 1959, pp. i-xv 1-251 text illustr.
- Das, D. see Chowdhury.**
- Dasmann, R. F. & Mossman, A. S.** Commercial use of game animals on a Rhodesian ranch. *Wild Life, Nairobi* 3 (3) : 7-14 6 figs. 3 tabs.
- Dater, E. E.** Tolerance among nocturnal woodland creatures. *J. Mammal.* 42 : 424-425.
- Dathe, H. (1).** Beiheft zum Magnettonband Tierstimmen im Zoo : Säugetiere Africa I (Löwe, Fleckenhähe, Flusspferd). Berlin (Volk und Wissen, Volkseigener Verlag [? 1959]) pp. 1-19.
- Dathe, H. (2).** Erfahrungen bei Affentransporten. *Die Kleintier-Praxis* 4 1959 : 110-113.
- Dathe, H. (3).** Beobachtungen zur Fortpflanzungsbiologie des Braunbären, *Ursus arctos* L. *Zool. Gart. Lpz.* 25 : 235-250 3 tabs. [English summary.]
- Daubercies, A. [Ed.]** Black rhinoceros survey 1959 to 1960. *Proc. Int. Un. conserv. Nat. Res.* 1960 1960 : 127-131.
- David, G. see Bullard.**
- Davidovic, M. & Popesković, D.** Einfluss von hoher Anpassungstemperatur in Herbst und Winter auf die Erscheinung des Winterschlafes bei *Citellus citellus* L. *Z. Biol. München* 112 1960 : 213-217 1 fig. [English summary.]
- Davies, D. F. see Simms.**
- Davies, J., Dempsey, E. W. & Amoroso, E. C. (1).** The subplacenta of the guinea pig : an electron microscopic study. *J. Anat., Lond.* 95 : 311-324 13 pls.
- Davies, J., Dempsey, E. W. & Amoroso, E. C. (2).** The subplacenta of the guinea-pig : development, histology and histochemistry. *J. Anat. Lond.* 95 : 457-473 1 fig. 11 pls.
- Davies, J. L.** Birth of an elephant seal on the Tasmanian coast. *J. Mammal.* 42 : 113-114.
- Davis, D. D.** Origin of the mammalian feeding mechanism. *Amer. Zool.* 1 : 229-234.
- Davis, D. E. (1).** A chart for estimation of life expectancy. *J. Wildl. Mgmt.* 24 1960 : 344-348 1 fig.
- Davis, D. E. (2).** Principles for population control by gametocides. *Trans. N. Amer. Wildl. Conf. No. 26* : 160-167.
- Davis, D. E. see Snyder.**
- Davis, P. E. see Delany.**
- Davis, R. A. (1).** A simple live-trap for small mammals. *Proc. zool. Soc. Lond.* 137 : 631-633 1 fig.
- Davis, R. A. (2).** Control of rats and mice. *Bull. Min. Ag. Fish. Food (London : H.M. Stationery Office)* No. 181 : i-vi 1-29 6 figs.
- Davis, R. A. & Jensen, A. G.** A note on the distribution of the coypu (*Myocastor coypus*) in Great Britain. *J. Anim. Ecol.* 29 1960 : 397 1 fig.
- Davis, W. B.** The female of *Mustela frenata texensis*. *J. Mammal.* 42 : 273.
- Davis, W. B. see Carter.**
- Davis, W. H., Beer, J. R. & Cook, E. F.** Effects of pregnancy on the spleen in mice. *J. Mammal.* 42 : 53-56 1 fig. 1 pl.
- Dawson, N.** Beobachtungen an Brandt's Steppenwühlmaus (*Microtus brandti* Radde) in der Mongolischen Volksrepublik. *Z. Säugetierk.* 26 : 176-183 5 figs. 4 tabs. map. [English summary.]
- Dawe, A. R. see Landau.**
- Dechaseaux, C.** Le genre *Dolichoerus*. *Ann. Paléont.* 45 1959 : 1-16 8 figs. 2 pls.
- Dehnel, A. (1).** Aufspeicherung von Nahrungsvorräten durch *Sorex araneus* Linnaeus 1758. *Acta Theriologica* 4 : 265-268.
- Dehnel, A. (2).** Die ersten Hybriden zwischen *Bos taurus* dom. L. ♂ und *Bison bonasus* (L.) ♀. *Acta Theriologica* 5 : 45-50 2 pls.
- Dekeyser, P. L. (1).** Le Parc National du Niokolo-Koba. III. Mammifères. *Mém. Inst. franc. Afr. n.* No. 48 1956 : 35-77 3 figs.
- Dekeyser, P. L. (2).** Une possible ressource naturelle : le gibier. *Notes afr. No.* 91-92 : 103-111 2 figs.
- Dekeyser, P. L. & Derivot, J. (1).** A propos de bêtes ignorées. *Notes afr. No.* 89 : 27-31.
- Dekeyser, P. L. & Derivot, J. (2).** La vie animale au Sahara. Paris (Librairie Armand Colin) 1959 pp. 1-220 text illustr.
- de Kock, L. L. (1).** The sinusoids of the carotid body tissue as part of the reticulo-endothelial system. *Acta anat.* 42 1960 : 213-226 6 figs.
- de Kock, L. L. (2).** The carotid body of a half term finwhale (*Balaenoptera physalus* [L.]). *Acta anat.* 43 1960 : 321-336 12 figs.
- Delany, M. J.** The ecological distribution of small mammals in north-west Scotland. *Proc. zool. Sci. Lond.* 137 : 107-126 1 fig. 5 tabs.

- Delany, M. J. & Davis, P. E. Observations on the ecology and life history of the Fair Isle field-mouse. *Apodemus sylvaticus fridariensis* (Kinnear). Proc. zool. Soc. Lond. 136: 439-452 5 figs. 6 tabs.
- de la Torre, L. see Hoffmeister.
- Delattre, A. & Fenart, R. Comment concevoir le rocher des mammifères. C.R. Acad. Sci. Paris 252: 2004-2006 1 fig.
- Della Corte, F. Fenomeni di riproduzione cellulare nell'ipofisi di embrioni di neonati e di soggetti giovani di Gatto. Boll. Zool. 26 1959: 245-254.
- Demiaszkiewicz, W. Die Geburt eines Hybriden von *Bison bonasus* (L.) ♂ und *Bos taurus dom.* L. ♀. Acta Theriologica 5: 51-56 1 pl.
- Dempsey, E. W. see Davies.
- Denenberg, V. H. see Ross.
- Denes, P. & Kocher, W. The reliability of Preyer's ear reflex in the mouse. Naturwissenschaften 48: 82.
- Denisov, V. P. Relationship of *Citellus pygmaeus* Pall. and *C. pusillus* Güld on the junction of their ranges. Zool. Zh. 40: 1079-1085 7 figs. 1 pl. [Russian, English summary.]
- Denney, R. N. An evaluation of elk validations in Colorado. Trans. N. Amer. Wildl. Conf. No. 26: 468-480 3 tabs.
- Dennis, B. J. & Kerr, D. I. B. Somaesthetic pathways in the marsupial phalanger, *Trichosurus vulpecula*. Aust. J. exp. Biol. med. Sci. 39: 29-42 10 figs.
- Dennis, B. J. see Clezy.
- Denyes, A. & Hassett, J. A study of the metabolism of liver, diaphragm and kidney in cold-exposed and hibernating hamsters. Bull. Mus. comp. Zool. Harv. 124 1960: 437-456 1 fig. 6 tabs.
- Denyes, A. & Horwood, R. H. A comparison of free adrenal cortical steroids in the blood of a hibernating and non-hibernating mammal. Canad. J. Biochem. & Phys. 38 1960: 1479-1487 3 figs. 2 tabs.
- Deol, M. S., Gröneberg, H., Searle, A. G. & Truslove, G. M. How pure are our inbred strains of mice. Genet. Res. 1 1960: 50-58 3 figs. 4 tabs.
- Deoras, P. J. Studies on Bombay rats: a note on the probable resistance of *B. bengalensis* to plague. Curr. Sci. 29 1960: 475-476 1 fig. 1 tab.
- Deraniyagala, P. E. P. Atavistic characters of palaeontological interest in *Elephas maximus* Linné. J. Pal. Soc. India 2 1957: 190-192 3 figs.
- Derivot, J. see Dekeyser.
- de Robertis, E. Some observations on the ultra-structure and morphogenesis of photoreceptors. J. gen. phys. 43 6 1960 Suppl.: 1-13 2 figs. 4 pls.
- De Silva, J. A. A plea for the protection of the dugong. Loris 8 1959: 173-174 1 fig.
- de V. Pienaar, U. (1). A second outbreak of anthrax amongst game animals in the Kruger National Park, 5th June to 11th October, 1960. Koedoe No. 4: 4-16 3 figs.
- de V. Pienaar, U. (2). A supplementary check list of Decapoda, fresh-water fish, amphibia, reptiles and small mammals recorded in the Kruger National Park. Koedoe No. 4: 167-177.
- de Vos, A. (1). Behaviour of barren ground caribou on their calving grounds. Meded. Inst. Toeg. biol. No. 50 1960: 165-170.
- de Vos, A. (2). Behaviour of barren ground caribou on their calving grounds. J. Wildl. Mgmt. 24 1960: 250-258 3 tabs.
- Dexter, R. W. An albino shrew from Ohio. J. Mammal. 42: 96.
- Dhaliwal, S. S. Ecological and geographical studies of *Rattus rattus* in Malaya. J. Mammal. 42: 349-358 2 figs. 2 pls.
- Dharmakumarsinhji, K. S. Some methods in census big game in India. J. Darjeeling nat. Hist. Soc. 31: 4-13.
- Dias, V. M. see Pacheco.
- Dice, L. R. Laboratory instruments for measuring the behaviour of shy or nocturnal small mammals. J. Mammal. 42: 159-166 7 figs.
- Dickerson, R. E. see Edmundson.
- Dickie, M. M. see Green.
- Dickson, A. D. & Bulmer, D. Observations on the origin of metrial gland cells in the rat placenta. J. Anat. Lond. 95: 262-273 2 figs. 2 pls.
- Dickson, A. D. see Bulmer.
- Diderholm, H. see Fichtelsh.
- Dieterlen, F. (1). Bemerkungen zu Zucht und Verhalten der Zwergmaus (*Micromys minutus scorinus* Hermann). Z. Tierpsychol. 17 1960: 552-554. [English summary.]
- Dieterlen, F. (2). Beiträge zur Biologie der Stachelmaus, *Acomys cahirinus dimidiatus* Cretzschmar. Z. Säugetierk. 26: 1-13 9 figs. 5 tabs. [English summary.]
- Dillon, L. S. Historical subspeciation in the North American marten. Syst. Zool. 10: 49-64 12 figs.
- Ditchfield, J., Meads, E. B. & Julian, R. J. Tularemia of muskrats in Eastern Ontario. Canad. J. publ. Hlth. 51 1960: 474-478 2 figs.
- Dittich, L. Zur Werkzeit des Eisbären (*Ursus maritimus*). Säugetierk. Mitt. 9: 12-15 1 fig.
- Dittich, L. & Einsiedel, I. u. Bemerkungen zur Fortpflanzung und Jugendentwicklung des Braunbären (*Ursus arctos* L.) im Leipziger Zoo. Zool. Gart., Lpz. 25: 250-269 4 figs. 3 tabs.
- Djulić, B. (1). Beitrag zur Kenntnis der Geographischen Verbreitung der Chiropteren Kroatiens. Bull. Mus. Hist. nat. Belgr. No. 14B 1959: 67-112 3 figs. 14 tabs. 4 maps.
- Djulić, B. (2). Contribution à l'étude de la repartition et de l'écologie de quelques chauves-souris cavernicoles de Dalmatie. Mammalia, Paris 25: 287-313 5 figs. 9 tabs.
- Dobroruka, L. J. (1). Der Karpatenhirsch, *Cervus elaphus montanus* Botezat 1903. Zool. Anz. 165 1960: 481-483.
- Dobroruka, L. J. (2). Zwei Bilder des Sudan-Panthers, *Panthera pardus pardus* Linné 1758. Zool. Anz. 167: 158-160 2 figs.
- Dobroruka, L. & Turek, A. Weisse Marale (*Cervus elaphus marali*) im Freigehege von Schehuschitz (Zehusice), Böhmen. Säugetierk. Mitt. 9: 49-51.
- Dodds, D. G. Food competition and range relationships of moose and snowshoe hare in Newfoundland. J. Wildl. Mgmt. 24 1960: 52-60 4 figs. 5 tabs.

- Dodds, D. G. & Mackiewicz, J. S.** Some parasites and diseases of snowshoe hares in Newfoundland. *J. Wildl. Mgmt.* 25 : 409-414 2 tabs.
- Dodge, W. E. & Snyder, D. P.** An automatic camera device for recording wildlife activity. *J. Wildl. Mgmt.* 24 1960 : 340-342 5 figs.
- Dollfus, R. P.** Station expérimentale de parasitologie de Richelieu (Indre-et-Loire). Contribution à la faune parasitaire régionale. Vertébrés. Liste des parasites par hôtes. Mammifères. *Ann. Parasit. hum. comp.* 36 : 174-191 8 figs.
- Doolittle, D. P.** The effect of single gene substitutions on resistance to radiation in mice. *Genetics* 46 : 1501-1509 3 tabs.
- Dorofeev, S. U. (1).** Main peculiarities in the annual life-cycle of the White Sea population of Greenland seals. *In* Marti, Yu-Yu & others. Soviet fisheries investigations in North European seas. Moscow (All Union Research Institute of Marine Fisheries and Oceanography (UNIRO) 1960) : 443-456.
- Dorofeev, S. V. (2).** Soviet investigations of fur seal in the north part of the Pacific Ocean. *Trud. Sovesh. Ichtiol. Kom. No. 12* : 164-169. [In Russian.]
- Dorst, J. (1).** Le rôle du scientifique dans la conservation de la nature. *Experientia* 17 : 1-4.
- Dorst, J. (2).** Le Congrès de l'Union internationale pour la Conservation de la Nature, Varsovie-Cracovie, 15-24 juin 1960. *Mammalia, Paris* 25 : 121-122.
- Dover, C.** In support of Zeuner : the case of the Faroe mouse. *Bull. nat. Inst. Sci. India* No. 7 1955 : 290-291.
- Downes, A. M.** On the mechanism of incorporation of [³⁵S] cystine into wool. *Aust. J. biol. Sci.* 14 : 109-119 3 figs. 1 tab.
- Downes, A. M. & Lyne, A. G.** Studies on the rate of wool growth using [³⁵S] cystine. *Aust. J. biol. Sci.* 14 : 120-130 6 figs. 2 tabs.
- Downing, S. C. & Baldwin, D. H.** Sharp-shinned hawk preys on red bat. *J. Mammal.* 42 : 540.
- Downs, T.** A study of variation and evolution in Miocene *Merychippus*. *Contr. Sci. Los Angeles* No. 45 : 1-75 22 figs. 7 tabs.
- Downs, T.** see White.
- Dreyer, C. J.** Properties of stressed bone. *Nature, Lond.* 189 : 594-595.
- Drummond, D. C.** The food of *Rattus norvegicus* Berk., in an area of sea wall, saltmarsh and mudflat. *J. Anim. Ecol.* 29 1960 : 341-347 1 fig. 2 tabs.
- [Dubrovo, I. A.]** [Fossil elephants of the S.S.S.R.]. *Trav. Inst. paléont. Acad. Sci. U.S.S.R.* 85 1960 : 1-79 28 figs. 6 tabs. 3 pls. [In Russian.]
- Dubrovsky, Yu. A.** Peculiarities of the distribution of *Citellus pygmaeus* Pall. and *C. fulvus* Licht. in the regions of their joint dwelling. *Zool. Zh.* 40 : 1868-1873 1 fig. [Russian, English summary.]
- Dudzinski, M. L. & Mykityowycz, R.** Analysis of weights and growth rates of an experimental colony of wild rabbits, *Oryctolagus cuniculus* (L.) C.S.I.R.O. *Wildl. Res. Melb.* 5 1960 : 102-115 7 figs. 2 tabs.
- Dukelskaya, N. M.** New rat control preparations. *Mater. Poznan. Faun. Flor. SSSR, N.S. (Zool.)* 33 1960 : 208-230. [Russian, English summary.]
- Dunaway, P. B. & Kaye, S. V. (1).** Cotton rat mortality during severe winter. *J. Mammal.* 42 : 265-268 1 pl.
- Dunaway, P. B. & Kaye, S. V. (2).** Effects of industrial oil disposal on wild mammals. *J. Mammal.* 42 : 554-556.
- Dunaway, P. B. & Kaye, S. V. (3).** Studies of small-mammal populations on the radioactive White Oak Lake bed. *Trans. N. Amer. Wildl. Conf. No. 26* : 167-185 6 figs. 3 tabs.
- Dunmire, W. W.** Breeding season of three rodents on White Mountain, California. *J. Mammal.* 42 : 489-493 3 tabs.
- Dunna, J. S.** Bosman's potto. *Niger. Fld.* 26 : 91-92 1 pl.
- Dunn, L. C.** Variations in the transmission ratios of alleles through egg and sperm in *Mus musculus*. *Amer. Nat.* 94 1960 : 385-393 5 tabs.
- Dunnet, G. M.** see Bailey.
- Duphorn, K. D.** Die pliozänen und pleistozänen Ablagerungen im Sülzbachtal zwischen Haselbach und Sülzfeld im östlichen Rhönvorland. *Neues Jb. Geol. Paläont. Monatshefte* 1960 : 354-367 5 figs. 4 tabs.
- Durrant, S. D.** see Lee.
- Duxing, A.** see Brauer.
- Dwyer, P. D.** New Zealand bats. *Tuatara* 8 1960 : 61-71 1 fig. map.
- Dyce, A. L.** Transmission of myxomatosis on the spines of thistles, *Cirsium vulgare* (Savi) Ten. *C.S.I.R.O. Wildl. Res.* 6 : 89-90.
- [Dzhafarov, R. D.]** [A new representative of the Quaternary rhinoceros (*Rhinoceros binagadensis* sp. nova) in the Binagadinsk fauna]. *In* [Location of Quaternary Fauna and Flora at Binagadinsk 4.] *Trub. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR* No. 10 1955 : 65-88 5 figs. 15 tabs. [In Russian.]
- Dzhafarov, R. D.** see Burchak-Abramovich.
- East, K.** see Phillips.
- Eberl-Rothe, G. (1).** Blutzellen. *(In Hofer & others. Primatologia. Handbook of Primatology* 3 (2) 1960. Blut- und Kreislauforgane pp. 1-21 1 fig. 6 tabs.).
- Eberl-Rothe, G. (2).** Knochenmark und Blutbildende Organe. *(In Hofer & others. Primatologia. Handbook of Primatology* 3 (2) 1960. Blut- und Kreislauforgane pp. 22-46 9 figs.).
- Eberl-Rothe, G. (3).** Histologie der Lymphknoten. *(In Hofer & others. Primatologia. Handbook of Primatology* 3 (2) 1960. Blut- und Kreislauforgane pp. 47-60 6 figs.).
- Eberl-Rothe, G. (4).** Die Milz. 2. Die mikroskopische Anatomie der Primatenmilz. *(In Hofer & others. Primatologia. Handbook of Primatology* 3 (2) 1960. Blut- und Kreislauforgane pp. 71-87 12 figs.).
- Ebert, J. D. [Ed.].** Steroid sex hormones and gonadogenesis in the opossum. *Yearb. Carnegie Instn. No. 59* 1960 : 403-405.
- Eckstein, B.** The development of the ovary of the rat. 1. Growth curves. *Bull. res. Counc. Israel* 8E 1960 : 109-118 5 figs. 3 tabs.
- Eddy, T. A.** Foods and feeding patterns of the colored peccary in southern Arizona. *J. Wildl. Mgmt.* 25 : 248-257.
- Edmundson, A. B., Hirs, C. H. W., Kendrew, J. C., Watson, H. C., Strandberg, B. E., Dickerson, R. E., Phillips, D. C. & Shore, V. C.** The amino-acid sequence of sperm whale myoglobin. *Nature, Lond.* 190 : 663-672 2 figs. 5 tabs.

- Edwards, F. B. Some notes on bats for 1960. *Nature in Wales* 7: 30-31.
- Edwards, R. G. *see* Fowler.
- Edwards, R. Y. (1). The habitat preferences of the boreal *Phenacomys*. *Murrelet* 36 1955: 35-38.
- Edwards, R. Y. (2). Dammed waters in a moose range. *Murrelet* 38 1957: 1-3.
- Edwards, R. Y. (3). Cottontail rabbit damage to young Douglas fir. *Murrelet* 41 1960: 25.
- Edwards, R. Y. & Green, D. E. The measurement of tracks to census grizzly bears. *Murrelet* 40 1959: 14-16 1 fig. 1 tab.
- Edwards, R. Y. *see* Miller.
- Egerton, F. N. William Harvey on the mating of red deer. *J. Mammal.* 42: 124-125.
- Egoscue, H. J. Small mammal records from western Utah. *J. Mammal.* 42: 122-124.
- Ehrlich, S. Experiments in reversion of the filling up processes in fish ponds. *Hydrobiologia* 18: 136-154 13 figs.
- Eibl-Erbsfeldt, I. Naturschutzprobleme auf den Galapagos-Inseln. *Acta Trop.*, Basel 17 1960: 97-137 32 figs.
- Einsiedel, I. v. *see* Dittrich.
- Eisenberg, J. F. Observations on the nest building behaviour of armadillos. *Proc. zool. Soc. Lond.* 137: 322-324 1 fig.
- Eisenbraut, M. (1). Die Fledermausberingung, ihre Entwicklung, ihre Methode und ihre Bedeutung für die wissenschaftliche Forschung (mit Anhang "Richtlinien für die Beringung von Fledermäusen" und "Bestimmungsschlüssel der heimischen Fledermausarten"). *Bonn. zool. Beitr.* 11 Sonderheft: 7-21 6 figs.
- Eisenbraut, M. (2). Die Wanderwege der in der Mark Brandenburg beringten Mausohren. *Bonn. zool. Beitr.* 11 Sonderheft: 112-123 3 figs. 3 tabs.
- Eisenbraut, M. (3). Wiederfunde einiger in Marburg/Lahn beringten Mausohren (*Myotis myotis*). *Bonn. zool. Beitr.* 11 Sonderheft: 189-191 1 fig.
- Eisenbraut, M. (4). Heat regulation in primitive mammals and in tropical species. *Bull. Mus. comp. Zool. Harv.* 124 1960: 31-43 2 figs.
- Eisenbraut, M. (5). Zwei neue Rhinolophiden aus Guinea. *Stuttgart Beitr. z. Naturk.* No. 39 1960: 1-7 2 figs. 2 tabs.
- Eisenbraut, M. (6). Gefangenschaftsbeobachtungen an *Rattus (Praomys) morio* (Trouessart). *Bonn. zool. Beitr.* 12: 1-21 5 figs. 14 tabs.
- Eisenbraut, M. (7). Beobachtungen über den Wärmehaushalt bei Halbaffen. *Biol. Zbl.* 80: 319-325 2 figs. 1 tab.
- Eker, R. & Mossige, J. A dominant gene for renal adenomas in the rat. *Nature, Lond.* 189: 858-859 1 fig.
- Elletherion, B. E. *see* King.
- Eliassen, E. & Leivestad, H. Sodium and potassium content in the muscles of hibernating animals. *Nature, Lond.* 192: 459-460 2 figs.
- Ellis, R. A. *see* Montagna.
- Eloff, F. C. (1). Observations on the migration and habits of the antelopes of the Kalahari Gemsbok Park. *Koedoe* No. 4: 18-30 1 fig.
- Eloff, F. C. (2). Enkele beskouings oor die moontlike oorsake vir die uitsterf van diere. *Koedoe* No. 4: 141-166. [English summary.]
- Emmens, C. W. Insemination pH and the sex ratio in rabbits. *J. Hered.* 51 1960: 156-157 1 tab.
- Empel, W. *see* Roskosz.
- Enemar, A. (1). The structure and development of the hypophysial portal system in the laboratory mouse, with particular regard to the primary plexus. *Ark. Zool. N.S.* 13: 203-252 35 figs.
- Enemar, A. (2). Notes on the histogenesis of the hypophysis of the laboratory mouse, with special reference to its relation to the development of the hypophysial portal system. *Acta Univ. lund. Avd. 2. N.F.* 56 19: 1-37 8 figs.
- Enemar, A. (3). The ontogeny of the hypophysial growth-promoting activity of the laboratory mouse, studied by means of tadpole tests, with notes on the response of the tadpoles to bovine growth hormone preparation. *Acta Univ. lund. Avd. 2. N.F.* 56 20: 1-34 2 figs.
- Engelbert, V. E. Thin preparations of hemopoietic tissues. *Canad. J. Zool.* 39: 367-372 3 pls.
- Engländer, H. Internationales Symposium über Methoden der Säugetierforschung. *Säugetierk. Mitt.* 9: 40.
- Engländer, H. & Johnen, A. G. Untersuchungen an rheinischen Fledermauspopulationen. *Bonn. zool. Beitr.* 11 Sonderheft: 204-209 3 tabs.
- Ensminger, M. E. *see* Hafez.
- Erasmus, G. d' & Zei, M. M. Il cranio giovanile di *Elephas antiquus italicus* di Pignatario Interamna, nella valle del Liri. *Atti Soc. sci. Napoli* (3) 3 6 1960: 1-32 17 figs. 5 pls.
- Erdbrink, D. P. A fragment of a fossil molar of the Indian elephant from West Java. *Mammalia, Paris* 25: 401-408 1 pl.
- Erickson, A. W. & Youatt, W. G. Seasonal variations in the hematology and physiology of black bears. *J. Mammal.* 42: 198-203 1 fig. 1 tab.
- Erikson, L. B. Sampling of vaginal and cervical Mullerian duct derivatives in the adult rhesus monkey. Part I. Indirect assessment of ovarian function. *Acta anat.* 43 1960: 158-192 10 figs. 1 pl. 4 tabs.
- Erkinaro, E. The seasonal change of the activity of *Microtus agrestis*. *Oikos* 12: 157-163 10 figs.
- Español, F. Contribución al conocimiento de los artrópodos y moluscos terrestres de las Islas Columbretes. *Misc. zool. Barcelona* 1 1958: 3-37 8 figs.
- Esterhuizen, A. C. *see* Lever.
- Ettlinger, G. Lateral preferences in monkeys. *Behaviour* 17: 275-287 8 tabs.
- Evans, F. C. *see* Howard.
- Evans, J. V. Differences in the concentration of potassium and the type of haemoglobin between strains and sexes of Merino sheep. *Aust. J. biol. Sci.* 14: 274-287 3 figs. 3 tabs.
- Evans, J. V. & Blunt, M. H. (1). Electrolyte and haemotocrit changes in the blood of sheep from foetal to postnatal life. *Aust. J. biol. Sci.* 14: 87-99 6 figs. 2 tabs.

- Evans, J. V. & Blunt, M. H. (2). Variation in the gene frequencies of potassium and haemoglobin types in Romney Marsh and Southdown sheep established away from their native environment. *Aust. J. biol. Sci.* 14: 100-108 3 tabs.
- Evered, D. F. Magnesium absorption in sheep. *Nature, Lond.* 189: 228-229 2 tabs.
- Evernden, J. F. *see* Leakey.
- Ewer, R. F. Further observations on suckling behaviour in kittens, together with some general considerations of the interrelations of innate and acquired responses. *Behaviour* 17: 247-260 2 tabs.
- Fabri, K. E. (1). Manipulation of objects by monkeys and the problem of the inception of labour activity. *Sovet. antrop. Mosk.* 2 1 1958: 23-31. [In Russian.]
- Fabri, K. E. (2). On the ability of rhesus monkeys (*Macaca mulatta*) to select objects by colour. *Vopros. antrop. Mosk.* No. 7 133-141 5 figs. 2 tabs. [In Russian.]
- Fagan, S. R. Osteology of *Myiagaulus laevis*, a fossil rodent from the Upper Miocene of Colorado. *Paleont. Contr. Univ. Kansas Vert.* 9 1960: 1-32 32 figs. 1 pl. 9 tabs.
- Falconer, D. S. (1). Selection of mice for growth on high and low planes of nutrition. *Genet. Res.* 1 1960: 91-113 7 figs. 11 tabs.
- Falconer, D. S. (2). The genetics of litter size in mice. *J. cell. comp. Physiol.* 56, Suppl. 1 1960: 153-167 6 figs. 5 tabs.
- Falconer, D. S. & Isaacson, J. H. Adipose, a new inherited obesity of the mouse. *J. Hered.* 50 1960: 290-292 2 figs.
- Falconer, D. S. & Roberts, R. C. Effect of inbreeding on ovulation rate and foetal mortality in mice. *Genet. Res. Camb.* 1 1960: 422-430 5 tabs.
- Falconer, D. S. *see* Bowman.
- Farrand, W. R. Frozen mammoths and modern geology. *Science* 133: 729-735 3 figs. 1 tab.
- Fateyev, K. Ya., Khromova, M. V. & Tuzova, L. S. Variability of inner organs in silver foxes *Vulpes fulvus* Desm. *Zool. Zh.* 40: 1090-1098 6 tabs. [Russian, English summary.]
- Faust, R. G. & Parspart, A. K. Permeability studies on the red blood cell of the ground-hog, *Marmota monax*. *J. cell. comp. Physiol.* 57: 1-3 1 fig. 1 tab.
- Fay, L. D. The current status of brucellosis in white-tailed and mule deer in the United States. *Trans. N. Amer. Wildl. Conf. No. 26*: 203-211 2 figs. 1 tab.
- Fay, L. D. *see* Rysel.
- Feiner, U. Über das Geschlechtschromatin bei der weissen Ratte. *Acta anat.* 43 1960: 1-11 10 figs. [English summary.]
- Fefjar, O. (1). Die plio-pleistozänen Wirbeltierfaunen von Hajnáčka und Ivanovce (Slowakei), CSR. I. Die Fundumstände und Stratigraphie. *Neues Jb. Geol. Paläont. Abh.* 111: 257-273 3 figs. 6 pls.
- Fefjar, O. (2). Die plio-pleistozänen Wirbeltierfaunen von Hajnáčka und Ivanovce (Slowakei), CSR. II. Microtidae und Cricetidae inc. sed. *Neues Jb. Geol. Paläont. Abh.* 112: 48-82 15 figs. 4 pls.
- Feldmann, R. Fledermausberingung im südlichen Westfalen. *Bonn. zool. Beitr.* 11 Sonderheft: 210-214 4 tabs.
- Felten, H. Fliegende Säugetiere. In Schmidt, H. & others, *Der Flug der Tiere*. Frankfurt am Main (Verlag Waldeman Kramer) [Senckenberg-Buch 39], 1960, pp. 1-164 text illustrs. [Mammals pp. 113-134.]
- Felten, H. & Klemmer, K. Fledermaus-Beringung im Rhein-Main-Lahn-Gebiet 1950-1959. *Bon. zool. Beitr.* 11 Sonderheft: 166-188 5 figs.
- Fenart, R. *see* Delattre.
- Ferens, B. "The slaughter of animals" in the Arctic. *Ochrona Przyr. Kraków* 26 1959: 65-94 14 figs. [Polish, English summary.]
- Ferguson, R. B. The weathering and persistency of pellet groups as it affects the pellet group count method of censusing mule deer. *Proc. Utah Acad. Sci.* 32 1955: 59-64.
- Ferris, D. H., Lord, R. D., Beamer, P. D. & Frits, T. E. A new disease in Illinois cottontails. *J. Wildl. Mgmt.* 24 1960: 179-184 3 figs.
- Festetics, A. Ährenmaushügel in Österreich. *Z. Säugetierk.* 26: 112-125 6 figs. [English summary.]
- Feuer, R. C. Mammals collected in the Kariak Lake region, Kodiak Island, Alaska. *Murrelet* 39 1958: 37-39 2 figs.
- Fey, V. A note on the behaviour of the tree hyrax. *J.E. Afr. nat. Hist. Soc.* 23 1960: 244-246.
- Fichtelius, K. E., Diderholm, H. & Ståhlström, J. The importance of different lymph nodes in lymphocyte recirculation. *Acta anat.* 44: 177-187 2 figs. 2 tabs.
- Fiennes, R. N. T.-W. (1). Report of the pathologist for the year 1959. *Proc. zool. Soc. Lond.* 136: 489-503.
- Fiennes, R. N. T.-W. (2). Report of the pathologist for the year 1960. *Proc. zool. Soc. Lond.* 137: 173-196 6 tabs.
- Figala, J. *see* Hanák.
- Findley, J. S. Geographic variation in New Mexican chickarees. *J. Mammal.* 42: 313-322 3 figs.
- Findley, J. S. & Jones, C. J. New United States record of the Mexican big-eared bat. *J. Mammal.* 42: 97.
- Finig, J. *see* Cook.
- Finlayson, H. H. (1). A re-examination of *Mesembryomys hirsutus* Gould 1842 (Muridae). *Trans. roy. Soc. S. Aust.* 84: 149-162 3 pls. 1 tab.
- Finlayson, H. H. (2). On Central Australian mammals. Part. IV. The distribution and status of central Australian species. *Rec. Aust. Mus.* 14: 141-191 1 fig.
- Firehuk, R. P. On vertical distribution and population of the vole *Microtus (Chionomys) nivalis* Martino in South Carpathians. *Zool. Zh.* 40: 294-295 1 tab. [Russian, English summary.]
- Firsov, L. A. (1). Vocal reactions as a mode of adaptation in great apes. *Vopros. antrop. Mosk.* No. 2 1960: 19-29 5 figs. [In Russian.]
- Firsov, L. A. (2). Physiological investigation of delayed imitative reflexes in apes (chimpanzees). *Vopros. antrop. Mosk.* No. 3 1960: 19-30 3 figs. [In Russian.]
- Fiscus, C. F. *see* Wilke.
- Fiscus, C. H. Growth in the Steller sea lion. *J. Mammal.* 42: 218-223 3 tabs.
- Fisher, K. C. *see* Pengelly.
- Fisler, G. F. Behaviour of salt-marsh *Microtus* during winter high tides. *J. Mammal.* 42: 37-43 2 tabs.

- Pitter, R. S. R.** Status of the grey seal. *Nature*, Lond. 189: 506.
- Fitzgerald, M. J. T.** Developmental changes in epidermal innervation. *J. Anat. Lond.* 45: 495-514 11 figs. 2 pls. 4 tabs.
- Fleay, D.** The family life of the *Mulgara*. *Anim. Kingd.* 64: 184-187.
- Flint, V. E. & Golovkin, A. N.** The role of the ridge Tannu-Ola as a zoogeographical barrier and some problems of the origin of the Tuva steppe-fauna. *Zool. Zh.* 40: 556-567 6 figs. [Russian, English summary.]
- Flyger, V.** Handling wild mammals with a new tranquilizer. *Trans. N. Amer. Wildl. Conf.* No. 26 1961: 230-233 1 tab.
- Foenander, E. C.** The conservation of the Malayan elephant. *Nature Conservation in Western Malaysia*, 1961. *Malay. Nat. J.* 21st Anniv. Spec. Issue: 192-196, 1 fig.
- Folk, G. E.** Day-night rhythms and hibernation. *Bull. Mus. comp. Zool. Harv.* 124 1960: 209-232 14 figs. 5 tabs.
- Folk, G. E., Frankel, H. M. & Folk, M. A.** Reserpine, chlorpromazine, and physiological functions of mammals that hibernate. *Proc. Iowa Acad. Sci.* 67 1960: 480-487 4 figs. 1 tab.
- Fomushkin, V. M.** An experiment on the control of the water-vole (*Arvicola terrestris* L.) in a closed water-body of the urban type. *Zool. Zh.* 40: 1899-1900. [Russian, English summary.]
- Fooden, J.** Urinary amino acids of non-human primates. *Zoologica, N.Y.* 46: 167-180 4 figs. 3 pls. 7 tabs.
- Foran, W. R.** A quaint species of great physical strength: the elusive ant-bear. *Wild Life, Nairobi* 3 (3): 30-33.
- Ford, E. H. R.** *See* Horn.
- Foreman, C. W.** Inherited haemoglobin ionographic properties in cotton rats. *Nature, Lond.* 189: 585-586 1 fig.
- Formozov, A. N. & Kodachova, K. S.** Les rongeurs vivant en colonies dans la steppe Eurasiennne et leur influence sur les sols et la vegetation. *Terre et la Vie* 108: 116-129.
- Forsberg, J.-G.** On the development of the cloaca and the perineum and the formation of the urethral plate in female rat embryos. *J. Anat. Lond.* 95: 423-436 7 pls.
- Förster, U.** Die Pferdephalangen aus des keltischen Oppidum von Manching. *Stud. vor.-frühgesch. Tierrest. Bayerns* 8 1960: 1-36 1 fig. 2 pls. 1 tab. 4 diag.
- Foster, J. B.** Life history of the *Phenacomys* vole. *J. Mammal.* 42: 181-198 3 figs. 1 pl. 1 tab.
- Foster, J. B. & Peterson, R. L.** Age variation in *Phenacomys*. *J. Mammal.* 42: 44-53 7 figs. 1 tab.
- Foster, W. E.** The square-lipped rhinoceros. *Lammergeyer* 1 (1): 25-35, map. [Reference omitted in 1960 Record.]
- Fowler, R. E. & Edwards, R. G. (1).** The fertility of mice selected for large or small body size. *Genet. Res. Camb.* 1 1960: 393-407 3 figs. 8 tabs.
- Fowler, R. E. & Edwards, R. G. (2).** "Midget," a new dwarfing gene in the house mouse dependant on a genetic background of small body size for its expression. *Genet. Res. Camb.* 2: 272-282 2 figs. 1 pl. 6 tabs.
- Fraaccaro, M.** *see* Hamerton.
- Frade, F. & Sileiro, S.** Palanca preta gigante de Angola. *Garcia de Orta* 8 1960: 21-38 4 pls. [English summary.]
- Francis, J. C.** Análisis de algunos factores de confusión en la sistemática genérica de los Mesotheriinae (Notoungulata, Typotheria). *Ameghiniana* 2 2 1960: 29-36. [English summary.]
- Frank, H. (1).** Probleme der Niederwildhege in Deutschland. [Small-game management Germany.] *Meded. Inst. Toeg. biol. No.* 50 1960: 46-51 2 figs. 2 tabs. [English summary.]
- Frank, H. (2).** Beobachtungen an Fledermäusen in Höhlen der Schwäbischen Alb unter besonderer Berücksichtigung der Mopsfledermaus (*Barbastella barbastellus*). *Bonn. zool. Beitr.* 11 Sonderheft: 143-149 3 figs. 2 tabs.
- Franke, M.** Anzahl und Grösse der Glomerula in der Niere des Syrischen Goldhamsters. *Anat. Anz.* 109: 293-310 1 fig. 5 tabs.
- Frankel, H. M.** *see* Folk.
- Franke, H. J. & Heinze, W.** Zur Blutgefäß- und Nervenversorgung der Schulter- und Beckengliedmasse beim Reh (*Capreolus capreolus* L.). 1. Mitteilung (Schultergliedmasse). *Anat. Anz.* 109: 334-347 4 figs.
- Fraser Darling, F.** Wild Life in an African Territory. London (Oxford University Press) 1960: i-viii 1-160 1 col. pl. 3 maps. 3 appendices.
- Frassetto, F.** Di una nuova classificazione delle razze umane fossili alla luce del digenismo. *Mem. Accad. Bologna* (10) 5 1949: 45-98 29 figs.
- Frechkop, S. (1).** De la partie lombaire du squelette chez le cheval sauvage de Mongolie, d'après le Dr. R. M. Stecher. *Zoo, Antwerp.* 26: 118.
- Frechkop, S. (2).** Le Professeur Edouard Bourdelle. *Zoo, Antwerp* 27: 25-27 2 figs.
- Freedman, L. (1).** New cercopithecoïd fossils, including a new species, from Taung, Cape Province, South Africa. *Ann. S. Afr. Mus.* 46: 1-14, 2 figs. 9 pls. 3 tabs.
- Freedman, L. (2).** Some new fossil cercopithecoïd specimens from Makapansgat, South Africa. *Palaeont. africana* 7: 7-45 17 figs. 20 tabs.
- Friant, M. (1).** Morphologie du cerveau des mammifères protothériens et métagériens (Monotremes et Marsupiaux). *Ann. Soc. zool. Belg.* 90 1959-60 [1960]: 317-338 14 figs.
- Friant, M. (2).** Sur les caractères anatomiques des dents jugales chez les castoridae d'Europe. *Acta anat.* 43 1960: 21-39 19 figs. [English summary.]
- Friant, M. (3).** De l'interprétation des prémolaires chez les Insectivores et les Primates. *Acta anat.* 43 1960: 137-143 6 figs. [English summary.]
- Frick, H. (1).** Das Herz der Primaten. (*In Hofer & others.* *Primatologia. Handbook of Primatology* 3 (2) 1960. Blut- und Kreislauforgane) p. 163-272 70 figs. 2 tabs.).
- Frick, H. (2).** Allometrische Untersuchungen an inneren Organen von Säugetieren als Beitrag zur "neuen Systematik." *Z. Säugetierk.* 26: 138-142 1 fig.
- Fritz, T. E.** *see* Ferris.
- Frydendall, M.** Occurrence of *Peromyscus leucopus aridulus* in Ellis County, Kansas with some notes on their activities. *Trans. Kansas Acad. Sci.* 64: 36-40 1 fig. 1 tab.

- Fujii, S. A single differential staining method for vaginal smears. *J. Fac. Fish. Hiroshima Univ.* 3 1960 : 197-201 1 pl.
- Fujino, K. Immunogenetic and marking approaches to identifying subpopulations of the North Pacific whales. *Sci. Rep. Whales Res. Inst.* 15 1960 : 85-142 9 figs. 46 tabs. 1 appendix.
- Fullager, P. J., Jewell, P. A., Lockley, R. M. & Rowlands, I. W. A census of the voles and mice on Skomer Island. *Nature in Wales* 7: 3-6.
- Fuller, J. L. see Mordkoff.
- Fuller, W. A. The ecology and management of the American bison. *Terre et la Vie* 108 : 286-304 2 figs. 1 pl. 2 tabs.
- Funaioli, U. & Simonetta, A. M. (1). Statut actuel des ongles en Somalie. *Mammalia*, Paris 25 : 97-111 1 fig.
- Funaioli, U. & Simonetta, A. M. (2). Spedizione biologica in Somalia, 1959. Risultati zoologici, II. Carnivora. *Monit. zool. ital.* 68 : 58-79 5 figs. [English summary.]
- Funaioli, U. & Simonetta, A. M. (3). Spedizione biologica in Somalia, 1959. Risultati zoologici, III. Insectivora. *Monit. zool. ital.* 68 : 103-110 1 fig. [English summary.]
- Funderburg, J. B. (1). Virginia muskrat in south-eastern North Carolina. *J. Mammal.* 42 : 268.
- Funderburg, J. B. (2). Erythristic raccoons from North Carolina. *J. Mammal.* 42 : 270-271.
- G, C. Les mammoths retrouvés congelés en Sibérie ne sont pas mort de froid. *Nature*, Paris No. 3316 : 350-351 1 fig.
- Gabis, R. V. Os des membres de *Dolichopithecus*, singe fossile du Pliocene du Roussillon. *C.R. Acad. Sci. Paris* 252 : 1368-1370 1 fig.
- [Gabuniya, L. K.] (1). [Towards a history of the *Hipparion* species (from materials from the Neogene of the USSR)] Moscow (Akad. Nauk. SSR) 1959 pp. 1-570 69 figs. 23 pls. 2 tabs. in text 106 tabs. added 4 graphs 3 maps. [In Russian.]
- Gabuniya, L. K. (2). Mammalian remains in the Middle Pliocene of the northern Caucasus (Kossjakino). *Paleont. Zh.* No. 1 : 163-165 2 figs.
- Gabuniya, L. K. & Iliescu, O. On the first discovery in Rumania of remains of gigantic Rhinoceroses of the family Indricotheriidae. *C.R. Acad. Sci. U.R.S.S. (Earth Sciences)* 130, 2, 1960 : 425-427, 3 figs. [In Russian.] See also Translation 130, 1-6, 1961 : 179-181, 3 figs.
- Gabusov, O. S. On the feeding of roe-deer. *Zool. Zh.* 39 1960 : 1892-1894 1 fig. [Russian, English summary.]
- [Gadshiev, V. G.] [Binagadinsk fossils of *Equus cf. hydruntinus* Reg.]. In [Location of Quaternary Fauna and Flora at Binagadinsk 3.] Trud. Estest.-Istor. Mus. G. Zardabi Akad. Nauk. Azerb. SSR. No. 6 1953 : 5-156 29 figs. 39 tabs. [In Russian.]
- Gaffrey, G. (1). Wanderratte und Hasenratte in ihrer Bedeutung als Hygieneschädlinge von Mensch und Haustier. *Angew. Parasit.* 1 1960 : 98-104. [English summary.]
- Gaffrey, G. (2). Hausratte als Nistkastenbewohner. *Säugetierk. Mitt.* 9 : 127.
- Gaffrey, G. (3). Merkmale der Wildlebenden Säugetiere Mitteleuropas. Leipzig (Akad. Verlagsges. Geest & Portig K.-G.) pp. 1-284 213 figs. 26 pls.
- Gahne, B. & Bendel, J. Blood and serum groups in reindeer compared with those in cattle. *Nature*, Lond. 192 : 529-530 1 fig. 2 tabs.
- Gaisler, J. Ökologische Beobachtungen in einer Kolonie der Kleinen Hafeisennase (*Rhinolophus A. hipposideros* Bechstein 1800). *Acta Mus. Regin. Hrad. 1A* 1960 : 83-99 3 figs. 1 pl. 1 tab. [Czechoslovak, German summary.]
- Gaisler, J. & Nevrlý, M. The use of coloured bands in investigating bats. *Mém. Soc. zool. tchécosl.* 25 : 136-141, 1 fig., 2 tabs.
- Galampos, R. see Weitzman.
- Gambarjan, P. P. & Karapetjan, W. S. Besonderheiten im Bau des Seelöwen (*Eumetopias californianus*), der Baikalrobbe (*Phoca sibirica*) und des Seotterers (*Enhydra lutris*) in Anpassung an die Fortbewegung im Wasser. *Zool. Jb. (Anat.)* 79 : 123-148, 10 figs., 7 tabs.
- Gambarjan, P. P., Papanjan, S. B. & Martirosjan, B. A. Materials on the ecology of *Meriones meridianus dahl* Schidl. in Armenia. *Byull. Mosk. Obsch. Isp. Prir. Otd. Biol.* 65 : 1960 : 17-22, 4 figs., 3 tabs. [Russian, English summary.]
- Gamble, H. J. & Goldby, S. Mast cells in peripheral nerve trunks. *Nature*, Lond. 189 : 766-767.
- Gandal, C. P. see Heuschelle.
- Garbini, J. D. see Trefolgi.
- Gard, R. Effects of beaver on trout in Sagehen Creek, California. *J. Wildl. Mgmt.* 25 : 221-242, 7 figs., 7 tabs.
- Garde, M. L. see Stump.
- Garevski, R. Die Mastodonreste beim Bahnhof Čaška in Mazedonien. *Acta Mus. maced. Sci. nat.* 7, 1960 : 75-87, 14 figs. [Slav, German summary.]
- Garry, B. see Blumberg.
- [Garut, V. E.] [The skeleton of the Vilnius mammoth.] *Byull. Kom. Izuch. Chetvert. Perioda* 24, 1960 : 99-100. [In Russian.]
- Gashwiler, J. S. Longevity of a wild deer mouse. *Murrelet* 41, 1960 : 27.
- Gashwiler, J. S., Robinette, W. L., & Morris, O. W. (1). Foods of bobcats in Utah and eastern Nevada. *J. Wildl. Mgmt.* 24 : 1960 : 226-229, 2 tabs.
- Gashwiler, J. S., Robinette, W. L., & Morris, O. W. (2). Breeding habits of bobcats in Utah. *J. Mammal.* 43 : 76-84, 6 tabs.
- Gashwiler, J. S. see Robinette.
- Găttuneanu, I. see Manolache.
- Gaunt, W. A. (1). The vascular supply in relation to the formation of roots on the cheek teeth of the mouse. *Acta. anat.* 43 1960 : 116-136, 8 figs.
- Gaunt, W. A. (2). The presence of apical pits on the lower cheek teeth of the mouse. *Acta anat.* 44 : 146-158, 8 figs.
- Gauthier-Pilters, H. Observations sur l'écologie du dromadaire dans le Sahara Nord-Occidental. *Mammalia*, Paris 25 : 195-280, 32 tabs.
- Gayre, G. R. A brief discussion of ethnology, palaeontology and the problem of the polygenic origin of mankind. *J. Palaeont. Soc. India* 2 : 1957 : 58-68.

- Gazin, C. L. New sciuravid rodents from the Lower Eocene Knight Formation of western Wyoming. *Proc. biol. Soc. Wash.* **74** : 193-194.
- Gee, E. P. (1). Report from India. *Oryx* **6** : 99-102, 2 pls.
- Gee, E. P. (2). The brow-antlered deer of Manipur. [abridged version]. *Oryx* **6** : 103-115, 3 pls.
- Gee, E. P. (3). The distribution and feeding habits of the golden langur. *Presbytis geei* Gee (Khajuria, 1956). *J. Bomb. nat. Hist. Soc.* **58** : 1-12, 2 pls., 2 maps.
- Gee, E. P. (4). Some notes on the golden cat *Felis temmincki* Vigors & Horsfield. *J. Bomb. nat. Hist. Soc.* **58** : 508-511, 2 pls.
- Geil, E. H. *see* Handley.
- Geissert, F. *see* Gouin.
- Geist, V. Feral goats in British Columbia. *Murrelet* **41**, 1960 : 34-40, 1 fig., 1 tab.
- Geist, V. *see* Cowan.
- Gentner, W. *see* Koenigswald.
- George, G. & Wakefield, N. Victorian cave bats. *Vict. Nat. Melb.* **77** : 294-302, 6 figs.
- George, J. C. & Susheela, A. K. A histophysiological study of the rat diaphragm. *Biol. Bull., Woods Hole* **121** : 471-480, 11 figs.
- Getz, L. L. (1). A population study of the vole, *Microtus pennsylvanicus*. *Amer. midl. Nat.* **64**, 1960 : 392-405, 8 figs., 1 tab.
- Getz, L. L. (2). Factors influencing the local distribution of shrews. *Amer. midl. Nat.* **65** : 67-88, 8 figs., 4 tabs.
- Getz, L. L. (3). Notes on the local distribution of *Peromyscus leucopus* and *Zapus hudsonius*. *Amer. midl. Nat.* **65** : 486-500, 7 figs.
- Getz, L. L. (4). Responses of small mammals to live-traps and weather conditions. *Amer. midl. Nat.* **66** : 160-169, 3 figs., 2 tabs.
- Getz, L. L. (5). Factors influencing the local distribution of *Microtus* and *Synaptomys* in southern Michigan. *Ecology* **42** : 110-119, 3 figs., 2 tabs.
- Getz, L. L. (6). Home ranges, territoriality, and movement of the meadow vole. *J. Mammal.* **42** : 24-36, 4 figs., 3 tabs.
- Getz, L. L. (7). New locality records of some Kansas mammals. *J. Mammal.* **42** : 282-283.
- [Gharutt, V. E.] [A skeleton of mammoth from Vilnius.] *Byull. Kom. Izuch. Chetvert. Perioda* **24**, 1960 : 99-100. [In Russian.]
- Ghosh, G. S. & Behura, B. K. A technique for the decalcification of the skull of mammals for the dissection of the brain for morphological studies. *Proc. Indian Sci. Congr.* **46** : 3, 1959 : 407.
- Gibson, W. C. *see* Miller.
- Gieseler, W. Die Fossilgeschichte des Menschen. Die Evolution der Organismen (Stuttgart, G. Fischer) **2**, 1957 : 951-1109, 34 figs.
- Gijzen, A. (1). Liste des mammifères ayant figuré ou figurant dans les collections du Jardin Zoologique de la Société Royale de Zoologie d'Anvers, depuis sa fondation en 1843 jusqu'au mois de juin 1960 (inclus), avec en regard l'année la plus reculée au cours de laquelle leur présence fut établie. *Bull. Soc. roy. Zool. Antwerp* No. 16, 1960 : 1-18.
- Gijzen, A. (2). Naissance de "Ndokuvokapi femelle". *Zoo, Antwerp* **26** : 77, 1 fig.
- Gijzen, A. (3). Onagres (*Equus onager* Pallas). *Zoo, Anvers* **26** : 113-117, 5 figs.
- Gijzen, A. (4). Le boeuf musqué (*Ovibos moschatus* (Zimmerman)). *Zoo, Anvers* **27** : 41-48, 11 figs.
- Giles, E. Multivariate analysis of Pleistocene and Recent coyotes (*Canis latrans*) from California. *Pub. Dept. Geol. Univ. Calif.* **36** : 1960 : 389-390, 4 figs, 6 tabs.
- Gill, J. (1). Die Durchgangszeiten der Nahrung durch den Verdauungskanal des Elches. [The rate of passage of foodstuffs through the alimentary tract of the elk.] *Meded. Inst. Toeg. biol. No. 50*, 1960 : 155-164, 2 figs., 3 tabs. [English summary.]
- Gill, J. (2). Der Grössenvergleich des Magendarmkanals des Mufflons, *Ovis musimon* (Pallas 1811) und des Mähnenchafes, *Ammotragus lervia* (Pallas 1777). *Acta Theriologica* **4** 1960 : 93-101, 4 tabs.
- Gill, J. (3). Die grösse des Magendarmkanals bei zwei Elchen *Alces alces* (Linnaeus 1758). *Acta Theriologica* **4** : 292-294.
- Gill, J. & Bieguszewski, H. Die Durchgangszeiten der Nahrung durch den Verdauungskanal der Nutria, *Myocastor coypus* Molina, 1782. *Acta Theriologica* **4**, 1960 : 11-26, 6 figs., 4 tabs.
- Gill, J. & Korda, P. Untersuchungen über den Magendarmkanal der Hirschziegenantilope, *Antilope cervicapra* (Linnaeus 1758). *Acta Theriologica* **4** 1960 : 45-52, 1 pl., 6 tabs.
- Gill, J. *see* Jaczewski.
- Gillham, M. E. Alteration of the breeding habit by sea birds and seals in western Australia. *J. Ecol.* **49** : 289-300, 2 figs., 4 pls.
- Gilmore, R. M. (1). A census of the California gray whale. *Spec. Sci. Rep. Fisheries, U.S. Fish and Wildlife Serv. No. 342*, 1960 : 1-30, 15 figs., 5 tabs.
- Gilmore, R. M. (2). Whales, porpoises and the U.S. navy. *Norsk Hvalfangsttid.* **50** : 89-108, 3 figs.
- Gilmore, R. M. (3). Whales without flukes or flippers. *J. Mammal.* **42** : 419-420, 1 fig.
- Gilmore, R. M. (4). A pelagic immature northern fur seal. *J. Mammal.* **42** : 549-550.
- Ginsburg, L. (1). Découverte de *Pliopithecus antiquus* Bl. dans le falun savignéen de Noyant-sous-le-Lude. (Maine-et-Loire). *C. R. Acad. Sci. Paris* **252** : 585-587, 1 fig.
- Ginsburg, L. (2). Un nouveau Tritylodonte du Trias supérieur du Basutoland (Afrique du Sud). *C.R. Acad. Sci. Paris* **252** : 3853-3854, 1 fig.
- Ginsburg, L. (3). Plantigradie et digitigradie chez les carnivores fissipedes. *Mammalia, Paris* **2** : 1-21, 6 figs.
- Ginsburg, L. (4). La faune des carnivores Miocènes de Sansan (Gers). *Mém. Mus. Hist. nat. Paris N.S.* **90** : 1-187, 72 figs., 20 pls., 1 tab.
- Gladkova, T. D. Comparative characteristic of the palm dermatoglyphics of man and some monkeys. *Sovet. antrop. Mosk.* **2** : 4, 1958 : 97-108, 2 figs., 5 tabs. [In Russian.]
- Glas, P. De hamster (*Cricetus cricetus* L.) in Zuid-Limburg. *Levende Nat.* **60** : 77-81, 4 figs. [English summary.]

- Glass, B. P. & Halloran, A. F. The small mammals of the Wichita Mountains Wildlife Refuge, Oklahoma. *J. Mammal.* 24: 234-239.
- Glass, B. P. *see* Jones.
- Glen, W. Pliocene and lower Pleistocene of the western part of the San Francisco Peninsula. *Publ. Dep. Geol. Univ. Calif.* 36: 1959: 147-198, 5 figs., 3 pls. [Mammals p. 185.]
- Glenister, T. W. Organ culture as a new method for studying the implantation of mammalian blastocysts. *Proc. roy. Soc.* 154B: 428-431, 2 pls.
- Glignic, M. O. Contribution à la connaissance de *Dolomys* Nehring des montagnes centrales de Bosnie et Herzégovine. *Bull. Mus. Hist. nat. Belgr.* No. 14B, 1959: 265-297, 13 figs., 6 pls. [Slav, French summary.]
- Gluecksohn-Waelsch, S. The inheritance of hemoglobin types and other biochemical traits in mammals. *J. cell. comp. Physiol.* 56: Suppl. 1 1960: 89-101, 2 figs., 1 tab.
- Godlewski, H. The method of freezing and drying in histochemistry. *Folia morph., Warszawa* 12: 97-104 5 figs. [Polish, English summary.]
- Goldby, S. *see* Gamble.
- Golikova, V. L. *see* Larina.
- Goller, H. Topographie und segmentaler Feinbau eines Rehrückenmarkes. *Anat. Anz.* 109: 137-155, 4 figs., 2 tabs.
- Golley, F. B. Trap and bait preferences of cotton rats. *J. Mammal.* 42: 106-107, 1 tab.
- Golley, F. B. (2). Effect of trapping on adrenal activity in *Sigmodon*. *J. Wildl. Mgmt.* 25: 331-333, 3 tabs.
- Golley, F. B. (3). Interaction of natality, mortality and movement during one annual cycle in a *Microtus* population. *Amer. midl. Nat.* 66: 153-159, 1 fig., 3 tabs.
- Golov, B. A. A trap for mole-rats. *Zool. Zh.* 40: 1110-1111, 1 fig. [Russian, English summary.]
- Golovkin, A. N. *see* Flint.
- Golvan, Y.-J. & Rioux, J.-A. Écologie des mérions du Kurdistan iranien. Relations avec l'épidémiologie de la peste rurale. *Ann. Parasit. hum. comp.* 36: 449-588, 60 figs., 9 tabs.
- Gomes-Ferreira, J. V. *see* Barbosa Sueiro.
- Gooding, C. D. *see* Calaby.
- Goodman, M. & Poulik, E. Effects of speciation on serum proteins in the genus *Macaca* with special reference to the polymorphic state of transferrin. *Nature, Lond.* 190: 171-172, 2 figs.
- Goodwin, G. G. (1). Flying squirrels (*Glaucomys volans*) of Middle America. *Amer. Mus. Novit.* No. 2059: 1-22, 7 figs., 2 tabs.
- Goodwin, G. G. (2). The murine opossums (Genus *Marmosa*) of the West Indies, and the description of a new subspecies of *Rhipidomys* from Little Tobago. *Amer. Mus. Novit.* No. 2070: 1-20, 10 figs., 1 tab.
- Goodwin, G. G. & Greenhall, A. M. A review of the bats of Trinidad and Tobago. Descriptions, rabies infection and ecology. *Bull. Amer. Mus. nat. Hist.* 122: 187-302, 113 figs., 40 pls., 2 tabs., 2 maps.
- Goodyear, G. F. Whales. *Sci. on the March* 41: 61.
- Gopalakrishna, A. & Moghe, M. A. Observations on the ovaries of some Indian bats. *Proc. nat. Inst. Sci. India* 26B Suppl. 1960: 11-19, 2 pls.
- Gordon, E. B. *see* Wiener.
- Gordon, J. G. The relationship between rumination and frequent feeding. *Anim. Behav.* 9: 16-19, 4 tabs.
- Gordon, M. S. Wave-riding dolphins. *Science* 133: 204-205, 1 fig.
- Gosney, D. C. Keeping rabbits in a warren. *Sch. Nat. Study* 56: 28-30, 2 figs.
- Goss, R. J. Experimental investigations of morphogenesis in the growing antler. *J. Embryol. exp. Morph.* 9: 342-354, 1 fig., 5 pls.
- Gottis, C. Sur l'âge des dunes de la région d'Ouchtata. Notes ser. géol. Tunisie 9 [1953]: 223-226, 3 pls. [From Bull. Soc. Sci. Nat. Tunisie, 6, 1952-3: 223-226.]
- Goueffon, S. *see* Camain.
- Gouin, F., Busser, L. & Geissert, F. Le rat musqué et le ragondin en Alsace. *Bull. Ass. philom. Strasbourg* 10, 1959: 99-114, 2 figs., map.
- Gould, E. *see* Negus.
- Gould, P. J. Emergence time of *Tadarida* in relation to light intensity. *J. Mammal.* 42: 405-407, 1 fig., 1 tab.
- Gould, W. P. & Brown, J. H. Atlantic white-cedar as a winter deer browse. *J. Wildl. Mgmt.* 25: 342.
- Gowen, J. W. *see* Schaible.
- Graaf, G. de. (1). A preliminary investigation of the mammalian microfauna in Pleistocene deposits of caves in the Transvaal system. *Palaeont. africana* 7: 59-118, 6 figs., 7 tabs., 2 graphs.
- Graaf, G. de. (2). A short survey of investigations of fossil rodents in African deposits. *S. Afr. J. Sci.* 57: 191-196.
- Graaf, G. de. (3). On the fossil mammalian microfauna collected at Krondraai by Draper in 1895. *S. Afr. J. Sci.* 57: 250-260.
- Gräber, G. A la recherche de Pinnipèdes et de Manchots dans la région polaire antarctique. *Zoo, Antwerp* 24: 126-130, 6 figs.
- Graefe, G. Die Aktivitätsperiodik des Flughörnchens, *Glaucomys volans* (Linnaeus 1758) und des Backenhörnchens, *Tamias striatus* (Linnaeus 1758). Ein Beitrag zur Frage der Doppelbestimmung von Gehegen mit dunkel- und lichtaktiven Tierarten. *Z. Tierpsychol.* 18: 84-90, 5 figs. [English summary.]
- Graff, N. Studies in the early growth of long bones in mice of two strains. *Growth* 24: 1960: 209-214.
- Graham-Jones, O. Tuberculosis in zoo animals. *Symp. zool. Soc. Lond.* No. 4: 69-79, 2 tabs.
- Gray, E. G. The granule cells, mossy synapses and Purkinje spine synapses of the cerebellum: light and electron microscope observations. *J. Anat., Lond.* 95: 345-356, 1 fig., 7 pls.
- Gray, J. General principles of vertebrate locomotion. *Symp. zool. Soc. Lond.* No. 5: 1-11, 5 figs.
- Green, D. E. *see* Edwards.
- Green, E. L. & Green, M. C. Transplantation of ova in mice. An attempt to modify the number of presacral vertebrae. *J. Hered.* 50: 1959: 109-114, 5 tabs.
- Green, M. (1). Late Pleistocene mammals from western South Dakota. *Proc. S. Dak. Acad. Sci.* 39: 1960: 38-40.

- Green, M. (2). A Tertiary *Cynomys* from South Dakota. *J. Paleont.* 34, 1960 : 545-547, 4 figs., 1 tab.
- Green, M. & Martin, H. *Bison latifrons* in South Dakota. *J. Paleont.* 34, 1960 : 548-550, 2 figs., 1 tab.
- Green, M. C. & Dickie, M. M. Linkage map of the mouse. *J. Hered.* 50: 1959 : 3-5, 1 fig.
- Greenhall, A. M. Check list of the bats of Trinidad and Tobago. *Caribbean Med. J.* 21, 1959 : 169-171.
- Greenhall, A. M. see Goodwin.
- Greer, B. see Roth.
- Gregoire, A. Recherches histophysiologiques sur la surrenale du rat au cours de la période péri-natale. *Arch. Biol., Paris* 72 : 413-459, 3 pls. [English summary.]
- Gregory, M. E. see Aschaffenburg.
- Gremyatsky, M. A. (1). Fossil monkeys on U.S.S.R. territory. *Sovet. antrop. Mosk.* 1: 1957 : 35-46, 6 figs., 1 tab. [In Russian.]
- Gremyatsky, M. A. (2). On the "new" genus of apes—the "Bonobo". *Sovet. antrop. Mosk.* 1: 1957 : 263-269, 3 figs., 1 tab. [In Russian.]
- Gremyatsky, M. A. (3). The *Oreopithecus* skeleton in Italy. *Sovet. antrop. Mosk.* 3, 1, 1959 : 123-124. [In Russian.]
- Gremyatsky, M. A. (4). Main line of primate evolution in the Neogene. *Vopros. antrop. Mosk. No. 7* : 3-8. [In Russian.]
- Gressitt, J. L. X. Terrestrial fauna. [In *Blumenstock, D. I.* A report on typhoon effects upon Jaluit Atoll.] *Atoll Res. Bull. No. 75* : 69-73.
- Griessel, J. A new game sanctuary for the Orange Free State. The Willem Pretorius Game Reserve. *Afr. Wild Life* 15 : 121-125, 3 figs.
- Griffes, W. E. More mice—more owl eggs. *Murrelet* 39, 1958 : 18.
- Griffen, A. B. Mammalian pachytene chromosome mapping and somatic chromosome identification. *J. cell. comp. Physiol.* 56: Suppl. 1, 1960 : 113-121, 2 figs., 2 tabs.
- Griffiths, M. E., Calaby, J. H. & McIntosh, D. L. The stress syndrome in the rabbit. *C.S.I.R.O. Wildl. Res.* 5: 1960 : 134-148, 6 figs., 1 pl., 3 tabs.
- Griffe, J. V. A study of homing in the cotton mouse, *Peromyscus gossypinus*. *Amer. midl. Nat.* 65 : 257-289, 8 figs., 7 tabs.
- Grimwood, I. The future status of Kenya's National Reserves. *Wild Life, Nairobi* 3 (2) : 22-29.
- Grimwood, I. R., Benson, C. W. & Ansell, W. F. H. The present-day status of ungulates in Northern Rhodesia. In *Fraser Darling, F.* Wild life in an African Territory. London (Oxford University Press), 1960 : 138-151 (Appendix III).
- Grinkraut, C. N. & Sawaya, P. On the action of ions on the uterine mechanics. *Bol. Fac. Filos. Cienc. S. Paulo (Zool.)*, No. 21, 1957 [1958] : 123-151, 8 figs.
- Grive, J. Le mécanisme du repérage par ultrasons chez les chauves-souris. *Nature, Paris* No. 3320 : 535-539, 7 figs.
- Grobman, A. B. see Charles.
- Gromov, I. M. The Quarternary ground-squirrels of the western Palearctic. 1. Subgenus *Colobotis* Brandt. *Trud. zool. Inst. Akad. Nauk. SSSR.* 29 : 22-80, 13 figs. [In Russian.]
- [Gromova, V.] (1). [Gigantic rhinoceroses.] *Trav. Inst. Paleont. Akad. Sci. URSS* 71 1959 : 1-164, 25 figs., 21 pls., 43 tabs. [In Russian.]
- [Gromova, V.] (2). [A new family (Tshelkariidae) of primitive carnivores (Creodonta) from the Oligocene of Asia.] *Trav. Inst. Paleont. Akad. Sci. URSS* 77 1960 : 41-74, 16 figs., 4 pls. [In Russian.]
- [Gromova, V.] (3). [New material of Palaeocene tapirs from Asia.] *Trav. Inst. Paleont. Akad. Sci. URSS* 77 1960 : 79-107, 10 figs., 8 tabs. [In Russian.]
- [Gromova, V.] (4). [The first discovery in the Soviet Union of an amynodont (new genus *Procadurcodon*).] *Trav. Inst. Paleont. Akad. Sci. URSS* 77 1960 : 128-151, 9 figs., 4 pls., 6 tabs. [In Russian.]
- [Gromova, V.] (5). [Key to the identification of the mammals of the U.S.S.R. based on skeletal bones. Part 2. Key for identification of the large tarsal bones.] *Trav. Comm. Quatern. Acad. Sci. URSS* 16 1960 : 1-116, 62 figs. [In Russian.]
- Gross, C. G. see Lovell.
- Gruber, J. Vier Jahre Fledermausberingung in Eberschwang, Ob.-Österreich (1956-59). *Bonn. zool. Beitr. Sonderheft* 1960 : 33-35, 1 tab.
- Grummt, W. Zur Morphologie der Kleinäugigen Wühlmaus *Pitymys subterraneus* de Selys-Longchamps. *Zool. Anz.* 166 : 26-32, 1 fig., 1 tab.
- Grüneberg, H. (1). Developmental genetics in the mouse, 1960. *J. cell. comp. Physiol.* 56 Suppl. 1, 1960 : 49-60, 1 tab.
- Grüneberg, H. (2). Genetical studies on the skeleton of the mouse. XXX. The development of syndactylism. *Genet. Res. Camb.* 1, 1960 : 196-213, 14 figs., 2 pls., 3 tabs.
- Grüneberg, H. (3). Genetical studies on the skeleton of the mouse. XXVII. The development of oligo-syndactylism. *Genet. Res. Camb.* 2 : 33-42, 10 figs., 1 tab.
- Grüneberg, H. (4). Genetical studies on the skeleton of the mouse. XXIX. Pudgy. *Genet. Res. Camb.* 2 : 384-393, 3 figs., 1 pl.
- Grüneberg, H. (5). Evidence for genetic drift in Indian rats (*Rattus rattus* L.). *Evolution* 15 : 259-262, 1 fig., 2 tabs.
- Grüneberg, H. & Truslove, G. M. Two closely linked genes in the mouse. *Genet. Res. Camb.* 1 1960 : 69-90, 9 figs., 4 pls., 14 tabs.
- Grüneberg, H. see Deel.
- Grzimek, B. The last great herds of Africa. *Nat. Hist. N.Y.* 70, 1 : 8-21, illustr.
- Grzimek, B. & Grzimek, M. Serengeti shall not die. [Translated from the German by E. L. & D. Rewald.] London (Hamish Hamilton) 1960, pp. 1-344, frontis., 71 pls. (incl. in pagination), text illustr.
- Graycki, S. Secretory granules of pancreatic cells refractometrically examined by phase contrast illumination. *Acta. anat.* 44 : 374-381, 16 figs.
- Grzywinski, L. Analysis of feces from the middle age period. *Zool. Polon.* 10 1959-1960 [1961] : 195-199, 2 pls.
- Gudmundsson, F. Bird protection in Iceland. *Bull. Int. Coun. Bird Prot.* 1952 6 : 153-160.
- Guerriero, A. see Wiman.

- Guest, W.** see Welch.
- Guilday, J. E. (1).** Prehistoric record of *Scalopus* from western Pennsylvania. *J. Mammal.* 42: 117-118.
- Guilday, J. E. (2).** *Plecotus* from the Pennsylvania Pleistocene. *J. Mammal.* 42: 402-403.
- Guilday, J. E. (3).** Abnormal lower third molar in *Odocoileus*. *J. Mammal.* 42: 551-553, 1 pl.
- Guller, E. R. (1).** Breeding season of the thylacine. *J. Mammal.* 42: 396-397, 1 fig.
- Guller, E. R. (2).** Notes on the externals of the potoroo, *Potorous tridactylus* (Kerr). *Pap. roy. Soc. Tasm.* 95: 41-48, 9 figs., 1 pl.
- Guller, E. R. (3).** The former distribution and decline of the thylacine. *Aust. J. Sci.* 23: 207-210, 2 figs., 4 tabs.
- Gunderson, H. L. (1).** A self-trapped gray fox. *J. Mammal.* 42: 270.
- Gunderson, H. L. (2).** An unusual cause of death of a white-tailed deer. *J. Mammal.* 42: 553.
- Gunkel, R. D.** see Tansley.
- Gupta, B. B.** Investigations of the rolling mechanism in the Indian hedgehog. *J. Mammal.* 42: 365-371, 2 figs., 1 pl.
- Gupta, B. B. & Sharma, H. L.** Birth and early development of Indian hedgehogs. *J. Mammal.* 42: 398-399, 1 pl.
- [Gureev, A. A.]** [Hares (Lagomorpha) from the Oligocene of Mongolia and Kazakhstan.] *Trav. Inst. Paléont. Akad. Sci. USSR* 77, 1960: 5-34, 12 figs. [In Russian.]
- [Gurizovich, L. A.]** [On the functional features of the retarded conditioned reflexes in dogs of one year of age]. *Vestz. Akad. Nauk. Beloruss. S.S.R. biol. No. 4*, 1960: 75-84, 3 figs. [In Belorussian].
- [Gurova, N. L.]** [On the development of intercostal musculature in the embryo of *Bos taurus*]. *Trud. Inst. Morf. Zhiv.* 29 1960: 75-102, 16 figs. [In Russian.]
- Guth, C.** La région temporelle des Édentés. *Le Puy (Haute-Loire) (Jeanne d'Arc)*, i-xviii, 1-191, 144 figs., 10 pls. [privately published.]
- Gysel, L. W.** An ecological study of tree cavities and ground burrows in forest stands. *J. Wildl. Mgmt.* 25: 12-20, 2 figs., 3 tabs.
- Haast, J. L. van.** Harbour seal and grey seal in Dutch coastal waters. *Meded. Inst. Toeg. biol. No. 50*, 1960: 64-67.
- Haartman, L. von.** Charles Darwin and ethology. The expression of the emotions in man and animals reconsidered. *Comment. biol. Helsingf.* 22, 7: 1-28, 5 figs.
- Haber, A.** Le sanglier en Pologne. *Terre et la Vie* 108: 74-76.
- Haberey, P.** Etude de la déperdition par chaleur sensible chez trois espèces de Rongeurs d'origine saharienne. *C.R. Soc. Biol. Paris* 154: 1635-1638, 1 fig., 1 tab.
- Hafetz, E. S. E. (1).** An experimental study of ova reception and some related phenomena in the rabbit. *J. Morph.* 108: 327-353, 1 fig., 4 pls., 8 tabs.
- Hafetz, E. S. E. (2).** Embryonic survival in relation to number and size of implantation swellings in the rabbit *Oryctolagus cuniculus*. *Proc. Soc. exp. Biol. Med.* 107: 680-684, 3 figs., 2 tabs.
- Hafetz, E. S. E. & Ensminger, M. E.** Transfer of ova to the bursa ovarii and the "suspended loop" of tube in the rabbit. *Nature, Lond.* 190: 557-559, 1 fig.
- Haff, J. S., Hovde, C. A. & Harman, P. J.** Factors related to recording photic potentials from cat cerebellum. *Neurology, Minneapolis* 11: 371-379 6 figs.
- Haff, J. S.** see Berry.
- Haforn, S. (1).** Analysis of food remnants from three nests of *Aquila chrysaetos*. *K. norske Vidensk. Selsk. Forh.* 32, 1960: 18-23, 3 figs. [Norwegian English summary.]
- Haforn, S. (2).** En dags sammenhengende iakttagelser over en grizzlybjørn-familie i Alaska. *K. norske vidensk. Selsk. Arb.* 1960: 79-85 2 figs., 1 tab. [English summary.]
- Haga, R.** Birds and seals around Japanese Syowa Base on Prince Harald Coast Antarctica (Preliminary). *Antarct. Rec. Tokyo No. 11*, 1961: 146-148.
- Hagemann, E. & Schmidt, G.** Ratte und Maus. Versuchsreihe in der Forschung. *Bertus* (Walter de Gruyter) 1960: pp. i-x 1-318 74 figs.
- Hahn, P.** see Vacek.
- Hailman, J. P.** Stereotyped feeding behaviour of a North Carolina nutria. *J. Mammal.* 42: 269.
- Haimovici, S.** L'étude de la faune néolithique de Truşeşti. *Ar. Sti. Univ. Iasi (2) Sti. nat.* 6 1960: 387-396 4 pls. 1 tab.
- Haimovici, S.** see Necrasov.
- Haines, H.** Seasonal changes in the reproductive organs of the cotton rat *Sigmodon hispidus*. *Texas J. Sci.* 13: 219-230 5 figs., 1 tab.
- Hale, J. B.** see Cook.
- Hall, E. R.** *Bison bison* in Nevada. *J. Mammal.* 42: 279-280 1 fig.
- Hall, E. R. & Alvarez, T. (1).** A new species of mouse (*Peromyscus*) from northwestern Veracruz, Mexico. *Proc. biol. Soc. Wash.* 74: 203-205.
- Hall, E. R. & Alvarez, T. (2).** A new subspecies of the black *Myotis* (bat) from Eastern Mexico. *Univ. Kansas Pub. Mus. nat. Hist.* 14: 69-72 1, fig.
- Hall, E. R. & Jones, J. K.** North American yellow bats "*Dasypus*", and a list of the named kinds of the genus *Lasurus* Gray. *Univ. Kans. Pub. Mus. nat. Hist.* 14: 73-98, 4 figs.
- Hall, J. S.** *Myotis austroriparius* in central Kentucky. *J. Mammal.* 42: 399-400.
- Hallander, A.** Hasselmusfynd i Jönköpings län 1954-1960. *Fauna o. flora* 56: 81-87 2 figs.
- Hall-Craggs, E. C. B.** The skeleton of an adolescent gorilla (*Gorilla gorilla beringei*). *S. Afr. J. Sci.* 91: 299-302 1 tab.
- Halloran, A. F. & Shrader, C. A.** Longhorn cattle management on Wichita Mountains Wildlife Refuge. *J. Wildl. Mgmt.* 24 1960: 191-196 1 fig., 4 tabs.
- Halloran, A. F.** see Glass.
- Halls, L. K. & Crawford, H. S.** Deer-forest habitat relationships in north Arkansas. *J. Wildl. Mgmt.* 24 1960: 387-395, 4 figs.
- Halnan, C. R. E.** see Tong.
- Haltenorth, T. (1).** Lebensraum, Lebensweise und Vorkommen des Mesopotamischen Damhirsches, *Cervus mesopotamicus* Brooke, 1875. *Säugetierk. Mitt.* 9: 15-39, 21 figs.

- Haltenorth, T. (2).** Fruchtbare Rückkreuzung eines weiblichen Mähnschaf-Hausziegen-Bastards mit einem Steinhock. *Säugetierk. Mitt.* 9: 105-109, 3 figs.
- Halvorson, C. H.** Curiosity of a marten. *J. Mammal.* 42: 111-112.
- Hamerton, J. L., Fraccaro, M., Carli, L. de, Nuzzo, F., Klinger, H. P., Hulliger, L., Taylor, A. & Lang, E. M.** Somatic chromosomes of the gorilla. *Nature. Lond.* 192: 225-228, 6 figs., 3 tabs.
- Hammond, L. E.** see Bentley.
- Hanák, V. & Figala, J.** Kleinsäuger des mittleren Böhmerwaldes. *Acta Univ. carol. Praha* 1960, 2, 1960: 103-124, 2 pls. [N.V.]
- Handley, C. O., Stafford, R. & Geil, E. H.** A west Virginia puma. *J. Mammal.* 42: 277-278, 1 pl., 1 tab.
- Hanly, E. W.** see Welch.
- Hannay, P.** Records of new and unusual mammals. *Ann. Rep. & Bull. Nyasaland Mus.* 1961: 30-32.
- Hannon, J. P., Vaughan, D. A. & Hock, R. J.** The endogenous tissue respiration of the Arctic ground squirrel as affected by hibernation and season. *J. cell. comp. Physiol.* 57: 5-10, 2 tabs.
- Hansen, R. M.** see Vaughan.
- Hanzawa, S., Asano, K. & Takai, F.** Catalogue of type specimens of fossils in Japan. *Palaeontological Society of Japan*: pp. i-vi, 1-422.
- Hao-chuang, L.** see Lavrov.
- Harlow, H. F.** Love in infant monkeys. *Sci. Amer.* 200 6, 1959: 68-74, figs.
- Harlow, R. F. (1).** Fall and winter foods of Florida white-tailed deer. *Quart. J. Fla. Acad. Sci.* 24: 19-38 3 figs., 7 tabs., 2 maps.
- Harlow, R. F. (2).** Characteristics and status of Florida black bear. *Trans. N. Amer. Wildl. Conf. No. 26:* 481-495 3 figs., 8 tabs.
- Harman, P. J.** see Berry.
- Harman, P. J.** see Haft.
- Harper, F.** Land and fresh-water mammals of the Ungava Peninsula. *Univ. Kans. Mus. Nat. Hist. Misc. Pub. No. 27:* 1-178, 3 figs., 8 pls., 45 maps.
- Harrison, D. L. (1).** Notes on some Central and East African bats. *Durban Mus. Novit.* 6 1960: 65-78, 1 fig., 5 pls., 4 tabs.
- Harrison, D. L. (2).** Notes on Southern and East African bats. *Durban Mus. Novit.* 7: 149-152, 1 fig.
- Harrison, D. L. (3).** On Savi's pipistrelle (*Pipistrellus savii* Bonaparte 1837) in the Middle East, and a second record of *Nycticeius schlieffeni* Peters 1859 from Egypt. *Senck. biol. Frankfurt* 42: 41-44, 1 pl., 2 tabs.
- Harrison, D. L. (4).** A checklist of the bats (Chiroptera) of Kenya Colony. *J. East Afr. Nat. Hist. Soc.* 23: 286-295.
- Harrison, D. L. & Lewis, R. E.** The large mouse-eared bats of the Middle East, with description of a new subspecies. *J. Mammal.* 42: 372-380, 3 pls., 4 tabs.
- Harrison, J. L.** The value of small mammals. *Nature Conservation in Western Malaysia, 1961. Malay. Nat. J.* 21st Anniv. Spec. Issue: 207-210.
- Harrison, R. J.** Experiments with diving seals. *Proc. roy. Inst. G.B.* 38: 414-429, 4 pls.
- Harrison, T. J.** The influence of the femoral head on pelvic growth and acetabular form in the rat. *J. Anat. Lond.* 95: 12-24, 6 figs., 2 pls., 2 tabs.
- Harrison, B. (1).** Die Niah-Höhlen in Borneo. Tier- und Menschenfunde aus 50,000 Jahren. *Umschau* 60 1960: 653-656, 10 figs.
- Harrison, B. (2).** The immediate problem of the orang-utan. *Oryx* 6: 128-136.
- Harrison, B. (3).** A study of Orang-utan behaviour in semi-wild state, 1956-1960. *Sarawak Mus. J.* 9: 422-447, 1 pl.
- Harrison, T. (1).** The threat to rare animals in Borneo. *Oryx* 6: 126-128.
- Harrison, T. (2).** A remarkably remote orang-utan; 1958-60. *Sarawak Mus. J.* 9: 448-451, 2 pls.
- Harrison, T. (3).** Prehistoric fauna changes and losses in Borneo. *Nature Conservation in Western Malaysia, 1961. Malay. Nat. J.* 21st Anniv. Spec. Issue: 89-92.
- Harrison, T., Hooijer, D. A. & Medway, Lord.** An extinct giant pangolin and associated mammals from Niah Cave, Sarawak. *Nature, Lond.* 189: 166.
- Harthoorn, A. M., Lock, J. A. & Lack, C. P.** Handling and marking of wild African elephants (*Loxodonta africana*) with the use of the drug immobilising technique—a preliminary report. *Brit. vet. J.* 117: 87-91, 3 figs.
- Harthoorn, A. M.** see Buechner.
- Hartwig, W.** Lifespan of cattle and horses under various climatic conditions and the reasons for premature culling. In *Wolstenholme, G. E. W. & O'Connor, M.* Ciba Foundation colloquia on ageing, 5, The lifespan of animals. London (J. & A. Churchill, Ltd.) 1959: 57-71, 7 tabs.
- Haslewood, G. A. D.** Comparative studies in "bile salts". 13. Bile acids of the leopard seal, *Hydrurga leptonyx*, and of two snakes of the genus *Bitis*. *Biochem. J.* 78: 352-359, 3 figs.
- Haslewood, G. A. D. & Ogan, A. U.** Comparative studies of "bile salts". 12. Application to a problem of rodent classification: Bile salts of the cutting grass, *Thryonomys swinderianus*. *Biochem. J.* 78 1959: 142-144.
- Hassett, J.** see Denyes.
- Hatsisiantos, C. & Kanellis, A.** La protection des oiseaux et mammifères rares de la Grèce. *Terre et la Vie* 106 Suppl.: 74-76.
- Haugen, A. O. (1).** Cottontails with "horns". *Proc. Iowa Acad. Sci.* 87, 1960: 610-615, 4 figs., 1 tab.
- Haugen, A. O. (2).** Wolverine in Iowa. *J. Mammal.* 42: 546-547.
- Havekost, H.** Die Beringung der Breitflügeliedermaus (*Eptesicus serotinus* Schreber) im Oldenburger Land. *Bonn. zool. Beitr.* 11 Sonderheft: 222-233, 1 fig., 6 tabs.
- Hawley, R. G.** see Waite.
- Hayek, H. von.** Die Lunge und Pleura der Primaten. In *Hofer & others.* *Primatologia. Handbook of Primatology*, 3, (2), 1960. *Respirationsorgane.* pp. 588-625, 24 figs.)
- Hayman, R. W.** The red goral of the North-east Frontier region. *Proc. zool. Soc. Lond.* 136: 317-324, 1 pl., 1 tab.

- Hayward, A. F. & Teagle, W. G. Some observations on the medial lobules of the ears of the long-eared bat *Plecotus auritus* (Linnaeus). *Proc. zool. Soc. Lond.* 137: 469-473, 2 pls.
- Hayward, B. J. & Johnson, R. R. Notes on *Plecotus phyllotis* from Arizona. *J. Mammal.* 42: 402.
- Hazard, E. B. The subgeneric status and distribution in time of *Citellus rexfordensis*. *J. Mammal.* 42: 477-483, 9 figs., 2 tabs.
- Hebel, R. Untersuchungen über das Vorkommen von lymphatischen Darmkrypten in der Tunica submucosa des Darms von Schwein, Rind, Schaf, Hund und Katze. *Anat. Anz.* 109, 1960: 7-27, 9 figs.
- Heberer, G. Grundlinien im modernen Bild der Abstammungsgeschichte des Menschen. *Biol. Jh.* 1960: 59-78. [N.V.]
- Hechter-Schulz, K. Bait selection by rats. *S. Afr. J. Sci.* 91: 303-311, 3 graphs.
- Hediger, H. & Kummer, H. Das Verhalten der Schnabeligel. (Tachyglossidae). In Kuenthal, W. & Krumbach, T. *Handbuch der Zoologie* 8 Bd., 10 Teil, 8a Beitr. (27 Lief.): 1-10, 7 figs.
- Heerd, P. F. van & Sluiter, J. W. (1). The results of bat banding in the Netherlands in 1959. *Natuur. Maandbl.* 49, 1960: 42-44.
- Heerd, P. F. van & Sluiter, J. W. (2). New data on longevity in bats. *Natuur. Maandbl.* 50: 36.
- Heerd, P. F. van & Sluiter, J. W. (3). Resultaten van het vleermuis-onderzoek in Nederland in 1960. *Levende Nat.* 64: 156-162, 6 tabs. [English summary.]
- Heerd, P. F. van see Sluiter.
- Hegg, O. Analysen von Grosswildkot aus dem schweizerischen Nationalpark zur Ermittlung der Nahrungszusammensetzung. *Rev. suisse Zool.* 68: 156-165, 1 fig., 2 tabs.
- Heideman, M. J. see Lynce.
- Heim, W. G. The serum proteins of the rat during development. *J. Embryol. exp. Morph.* 9: 52-59, 2 figs., 1 tab.
- Heimbürger, N. Beobachtungen an handaufgezogenen Wildcaniden (Wölfin und Schakalin) und Versuche über ihre Gedächtnisleistungen. *Z. Tierpsychol.* 18: 265-284, 16 figs., 5 tabs. [English summary.]
- Heimstra, N. W. & Newton, G. Effects of prior food competition on the rat's killing response to the white mouse. *Behaviour* 17: 95-102.
- Heinze, W. Die Kaumuskulatur des Schweines in anatomischer und funktioneller Hinsicht. *Anat. Anz.* 109: 269-291, 16 figs.
- Heinze, W. see Franke.
- Hell, P. Starkes Anwachsen der Luchsbestände in der Slowakei. *Z. Säugetierk* 26: 57-59, 1 tab.
- Heller, F. (1). Das Diluvialprofil in der Jungfernhöhle bei Tiefenellern, Landkreis Bamberg. *Erlanger geol. Abh.* 34 1960: 3-17, 1 pl.
- Heller, F. (2). Würmeiszeitliche und letztinterglaziale Faunenreste von Lobsing bei Neustadt/Donau. *Erlanger geol. Abh.* 34 1960: 19-33, 2 pls.
- Helminen, M. see Jellison.
- Helwing, S. see Schnapp.
- Henderson, F. R. Beaver in Kansas. *Misc. Publ. Mus. nat. Hist. Kansas Univ.* No. 26, 1960: 1-85, 36 figs.
- Hepner, V. G. On geographic variability of pikas (*Ochotona* Link.; *Mammalia*, *Lagomorpha*) inhabiting Turkmenia. *Zool. Zh.* 40: 621-622. [Russian, English summary.]
- [Hepner, V. G., Nasimovitch, A. A. & Bannikov, A. G.] [The mammals of the Soviet Union] [Edited by Hepner, V. G. & Naumov, N. P.] Moscow, 1961, 1. Even-toed and odd-toed mammals. pp. 1-776, 252 figs., 6 pls. [In Russian.]
- Herák, I. Beitrag zur funktionellen Anatomie der Wasserratte (*Arvicola terrestris* L.). *Vestn. českosl. zool. Spolec.* 25: 28-38, 6 figs., 4 pls. [Czechoslovak, German summary.]
- Herlant, M. L'activité génitale chez la femelle de *Galago senegalensis moholi* (Geoffr.) et ses rapports avec la persistance de phénomènes d'ovogenèse chez l'adulte. *Ann. Soc. roy. Zool. Belg.* 91 (1960-1961): 1-15.
- Herlant, M. see Peyre.
- Hermann, A. L. The degree of resistance to water deficiency in some mouse-like rodents of the steppe zone. *Zool. Zh.* 40: 914-921, 1 fig., 3 tabs. [Russian, English summary.]
- Hernández-Camacho, J. Primitiae Mastozoologicae Colombianae—I. Status taxonomico de *Sciurus pucheranii santanderensis*. *Caldasia*, Bogotá (Bol. Inst. Cienc. Nat. Univ. Nac. Colombia) 8, 1960: 359-368, 2 tabs [Spanish, English summary.]
- Hernández-Pacheco, F. & Crusafont Pairó, M. Primera caracterización paleontológica del Terciario de Extremadura. *Bol. Real. Soc. Esp. Hist. nat. Secc. Geol.* 58, 1960: 275-282, 1 pl.
- Herre, W. (1). Zur Problematik der Parallelbildungen bei Tieren. *Zool. Anz.* 166: 309-333, 14 figs.
- Herre, W. (2). Kleine Bemerkung zu systematischen Fragen. *Z. Säugetierk* 26: 189-191, 3 figs. [English summary.]
- Herriek, E. H. Some preliminary experiments on adrenal function during seasonal stresses in a wild marsupial (*Selagin brachyurus*). *J. roy. Soc. W. Aust.* 44: 61-64, 8 figs.
- Hershkovitz, P. (1). On the South American small-eared Zorro *Atelocynus microtis* Scatler (Canidae). *Fieldiana Zool.* 39: 505-523, 7 figs., 1 tab.
- Hershkovitz, P. (2). On the nomenclature of certain whales. *Fieldiana Zool.* 39: 547-565.
- Herter, K. Über Igel von Neuseeland. *Zool. Beitr.*, Berl. N.F. 6: 347-376, 11 figs.
- Henschele, W. P. (1). Cancer... a problem in the zoo, too. *Zoonoz* 34 (4): 6-7, 1 fig.
- Henschele, W. P. (2). Chlordiazepoxide for calming zoo animals. *J. Amer. vet. med. Ass.* 139: 998-998.
- Henschele, W. P. & Gandal, C. P. Handling and treatment of common exotic mammal pets. *J. Amer. vet. med. Ass.* 138: 608-612, 6 figs.
- Hewer, H. R. & Backhouse, K. M. "Headless" grey seal pups. *Proc. zool. Soc. Lond.* 137: 630-631, 1 pl.
- Hewes, G. W. Food transport and the origin of hominid bipedalism. *Amer. anthrop.* 63: 687-710.
- Hewson, R. Collars for marking mountain hares. *J. Wildl. Mgmt.* 25: 329-331, 1 fig., 1 tab.
- Heyner, S. The survival of embryonic mammalian cartilage after freezing to -79°C. *J. exp. Zool.* 144, 1960: 165-177, 4 figs., 1 pl., 5 tabs.

- Hickling, G. *see* Coulson.
- Hieble, J. L. & Blosson, J. R. A method of immobilizing bear for ear tagging. *Calif. Fish Game* 47 : 303, 1 fig.
- Hildebrand, M. (1). Further studies on locomotion of the cheetah. *J. Mammal.* 42 : 84-91, 5 figs.
- Hildebrand, M. (2). Voice of the grasshopper mouse. *J. Mammal.* 42 : 263.
- Hill, C. A. (1). Origin of the zoo. *Zoonooz* 33 (12) 1960 : 11-15, 4 figs.
- Hill, C. A. (2). Bushbuck and impala. *Zoonooz* 34 (2) : 3-7, 4 figs.
- Hill, C. A. (3). Wildebeest—hartebeest. *Zoonooz* 34 (6) : 3-7, 5 figs.
- Hill, C. A. (4). Fennecs, sentries of the sands. *Zoonooz* 34 (12) : 3-5, 3 figs.
- Hill, G. R. Rats in Wales. *Nature in Wales* 7 : 43-45.
- Hill, J. E. (1). Indo-Australian bats of the genus *Tadarida*. *Mammalia Paris* 25 : 29-56, 5 tabs.
- Hill, J. E. (2). Fruit-bats from the Federation of Malaya. *Proc. zool. Soc. Lond.* 136 : 629-642, 1 fig.
- Hill, W. C. O. (1). Vascular specializations in platyrrhine monkeys. *Z. wiss. Zool.* 165 : 133-139, 3 figs., 2 tabs.
- Hill, W. C. O. (2). Abominable snowmen: the present position. *Oryx* 6 : 86-98.
- Hill, W. C. O. (3). Hybridization in marmosets. *Proc. zool. Soc. Lond.* 137 : 321-322, 1 tab.
- Hillaby, J. (1). Harvesting wild animals. *New Scientist* 9 : 744-746, 4 figs.
- Hillaby, J. (2). Conservation in Africa: a crucial conference. *New Scientist* 11 : 536-538, 4 figs.
- Hillaby, J. (3). Elephants as a pest control problem. *New Scientist* 12 : 736-738, 5 figs.
- Hilton, A. H. Hominid evolution. *New Scientist* 11 : 479.
- Hirs, C. H. W. *see* Edmundson.
- Hirst, S. M. Experiment with eland. *Afr. Wild Life* 15 : 117-120, 3 figs.
- Hislop, J. A. (1). The distribution of elephant, rhinoceros, seladang and tapir in Malaya's National Park. *Nature Conservation in Western Malaysia*, 1961. *Malay. Nat. J.* 21st Anniv. Spec. Issue : 95-99, 2 figs.
- Hislop, J. A. (2). Protection of wild life in the Federation of Malaya. *Nature Conservation in Western Malaysia*, 1961. *Malay. Nat. J.* 21st Anniv. Spec. Issue : 136-142.
- Hjortajö, C.-H. Aspects of gestation period and fetal development. *Forh. K. fysio. Sällsk. Lund* 30, 1960 : 71-78, 1 fig.
- Hoek, R. J. Seasonal variations in physiologic functions of Arctic ground squirrels and black bears. *Bull. Mus. comp. Zool. Harv.* 124, 1960 : 155-171, 10 figs.
- Hoek, R. J. *see* Hannon.
- Hocquet, P. *see* Masseyeff.
- Hodos, W. *see* Weitzman.
- Hoehl, E. Beringungsergebnisse in einem Winterquartier der Mopsfledermäuse (*Barbastella barbastellus*) Schreb. in Fulda. *Bonn. zool. Beitr. Sonderheft* 1960 : 192-197, 2 figs., 1 tab.
- Hoesch, W. (1). Über Ziegen hütende Bärenpaviane (*Papio ursinus ruacana* Shortridge). *Z. Tierpsychol.* 18 : 297-301, 5 figs. [English summary.]
- Hoesch, W. (2). Vom Honigdachs (*Mellivora capensis*). *Nat. u. Volk* 91 : 340-342, 3 figs.
- Hofer, H. Das Gestaltwandelproblem des Schädels der Säuger. *Mitt. naturf. Ges. Bern. N.F.* 18, 1960 : 81-87, 3 figs.
- Hofer, H. Schultz, A. H. & Starck, D. *Primatologia. Handbook of Primatology*. 3, (2), 1960. Blut- und Kreislauforgane. Respirationsorgane. Gebiss. Basel and New York (S. Karger) pp. i-xvi, 1-872, text illustr.
- Hofer, H. *see* Thenius.
- Hoffmann, M. Zu Uloth: Von der Bisamratte (*Ondatra zibethica*) am Breitunger See. *Säugetierk. Mitt.* 9 : 163-164.
- Hoffman, R. A. & Kirkpatrick, C. M. Seasonal changes in thyroid gland morphology of male gray squirrels. *J. Wildl. Mgmt.* 24, 1960 : 421-425, 2 figs., 1 tab.
- Hoffman, R. A. *see* Kirkpatrick.
- Hoffman, R. S. & Taber, R. D. Preliminary notes on the vertebrate faunas of the Montana alpine. *Proc. Montana Acad. Sci.* 19, 1960 : 91.
- Hoffmeister, D. F. Unusual coat colors in some wild American carnivores. *Trans. Ill. St. Acad. Sci.* 53, 1960 : 141-143, 1 fig.
- Hoffmeister, D. F. & de la Torre, L. Geographic variation in the mouse *Peromyscus difficilis*. *J. Mammal.* 42 : 1-13, 2 figs.
- Hoffstetter, R. Description d'un squelette de *Planops* (Gravigrade du Miocène de Patagonie). *Mammalia, Paris*, 25 : 67-96, 12 figs. [English summary.]
- Hofmann, R. Berlockenähnliche, paarige Oberschenkelanhänge bei einem Rothirsch (*Cervus elaphus hippelaphus*). *Anat. Anz.* 109 : 369-379, 8 figs.
- Holden, F. F. *see* Rosen.
- Hollander, W. F. (1). The problem of superfetation in the mouse. *J. Hered.* 50, 1959 : 71-73, 2 figs.
- Hollander, W. F. (2). Genetics in relation to reproductive physiology in mammals. *J. cell. comp. Physiol.* 56, Suppl. 1, 1960 : 61-72, 2 figs.
- Holliman, D. C. Erythremia in an Alabama cottontail. *J. Mammal.* 42 : 254-255.
- Holmes, A. M. Observations on the intrinsic innervation of the rectum and anal canal. *J. Anat., Lond.* 95 : 416-422, 2 pls.
- Holmes, R. L. The adrenal glands of the ferret, *Mustela putorius*. *J. Anat., Lond.* 95 : 325-336, 1 fig., 3 pls., 1 tab.
- Holten, J. W. & Toll, J. E. Winter weights of juvenile and adult swamp rabbits in southeastern Missouri. *J. Wildl. Mgmt.* 24, 1960 : 229-230, 1 tab.
- Holten, J. W. *see* Martinson.
- Hols, P. Operation Noah. *Frontiers* 26 1 : 12-15, 5 figs.
- Hooijer, D. A. (1). Namaak neushoorn-hoorns. *Ned. Tijdsch. Geneesk.* 104, (48), 1960 : ?
- Hooijer, D. A. (2). The fossil vertebrates of Ksar, Akil, a Palaeolithic rock shelter in the Lebanon. *Zool. Verhandl. Leiden* No. 49 : 1-68, 2 pls., 25 tabs. [Mammalia pp. 11-68.]

- Hooijer, D. A. (3).** The giant extinct pangolin (*Manis palaiojavanica* Dubois) from Niah. Sarawak Mus. J. 9: 350-355, 1 pl.
- Hooijer, D. A. (4).** The orang-utan in Niah Cave prehistory. Sarawak Mus. J. 9: 408-421, 1 pl.
- Hooijer, D. A. & Singer, R. (1).** Fossil rhinoceroses from Hopefield, South Africa. Zool. Meded. 37, 1960: 113-128, 1 pl., 6 tabs.
- Hooijer, D. A. & Singer, R. (2).** The fossil hippopotamus from Hopefield, South Africa. Zool. Meded. 37: 157-165, 2 pls., 11 tabs.
- Hooijer, D. A. see Harrison.**
- Hook, O. (1).** The wild mammals. In *Bertin, J., et al.* The New Forest, London (Galley Press) 1960, pp. i-x, 1-201, illustr. [pp. 70-87.]
- Hook, O. (2).** Notes on the status of seals in Iceland, June-July, 1959. Proc. zool. Soc. Lond. 137: 628-630, 1 fig., 1 pl.
- Hooper, E. T. (1).** Notes on mammals from western and southern Mexico. J. Mammal. 42: 120-122.
- Hooper, E. T. (2).** The glans penis in *Proechimys* and other caviomorph rodents. Occ. Pap. Mus. Zool. Univ. Mich. No. 623: 1-18, 5 figs.
- Horn, G. & Ford, E. H. R.** The effects of thyroid deficiency on the growth of the rat skull. J. Anat. Lond. 95: 131-136, 1 fig., 1 pl., 1 tab.
- Hornocker, M. see Craighead.**
- Horwood, R. H. see Denyes.**
- Hosking, K. F. G.** A re-examination of an alleged stanniferous deer's-horn from the Cornish tin-bearing alluvials. Trans. R. geol. Soc. Cornwall 19, 1960: 154-161, 1 fig., 2 pls.
- Houck, W. J.** Notes on the Pacific striped porpoise. J. Mammal. 42: 107.
- Hough, J. R.** Review of Oligocene didelphid marsupials. J. Paleont. 35: 218-228, 2 figs.
- House, H. B. see Long.**
- Hovde, C. A. see Berry.**
- Hovde, C. A. see Haft.**
- Howard, M. M. see Cornwall.**
- Howard, W. E.** A pocket gopher population crash. J. Mammal. 42: 258-260, 1 tab.
- Howard, W. E. & Brock, E. M.** A drift-fence pit trap that preserves captured rodents. J. Mammal. 42: 386-391, 1 fig., 1 pl., 1 tab.
- Howard, W. E. & Evans, F. C.** Seeds stored by prairie deer mice. J. Mammal. 42: 260-263, 1 tab.
- Howell, F. C. Reply.** [To Comments by Livingstone, F. B. (q.v.) and Cowgill, G. (q.v.) on *Howell, F. C.* European and northwest African Middle Pleistocene hominids. Curr. Anthropol. 1, 1960: 192-232.] Curr. Anthropol. 2: 118-120.
- Howells, W.** Mankind in the making. The story of human evolution. London (Secker & Warburg) 1960 pp. 1-382, text illustr.
- Howes, J. R., Davis, G. K., Loggins, P. E. & Hentges, J. F.** Blood potassium and sodium of Hereford and Brahman cattle and some breeds of sheep maintained in Florida. Nature, Lond. 190: 181-182, 2 tabs.
- Hrisač, C. see Manolache.**
- Hsien, H. H. see Chow.**
- Hsu, T. C. see Levan.**
- Hsu, Y. H., Hsien, H. H. & Chou, P. H.** Artiodactyla. In *Chow, M. & others.* Pleistocene mammalian fossils from the Northeastern Provinces. Mem. Inst. Vert. Pal. Acad. Sinica 3, 1959: 50-74, 2 figs., 16 pls. [Chinese, English summary.]
- Hsu, Y. H. see Chow.**
- Hu, C.-K.** The occurrence of *Parabrontops* in Hami, Sinkiang. Vertebrata Palasiatica 1961: 41-42, 1 fig. [Chinese, English summary.]
- Hu, C. K., Liu, H. I., Hsu, Y. H., Chou, P. H. & Lee, Y. C.** Perissodactyla. In *Chow, M. & others.* Pleistocene mammalian fossils from the Northeastern Provinces. Mem. Inst. Vert. Pal. Acad. Sinica 3, 1959: 34-49, 14 pls. [Chinese, English summary.]
- Hu, C. K. see Chow.**
- Hu, C. K. see Kahlke.**
- Huang, W. P. & Han, D. F.** On the formation and mammalian fossils of Tatitsun, Tungshensien in Hupei Province. Paleovertebrata et Paleanthropologia 1 (1), 1959: 43-45. [In Chinese] [N.V.]
- Hubbard, R. L. & McKeever, S.** Meadow mouse girdling—another cause of death of reseeded bitterbrush plants. Ecology 42: 198, 2 figs.
- Hubbs, C. L.** The marine vertebrates of the outer coast [of Baja California]. Syst. Zool. 9, 1960: 134-147.
- Hückinghaus, F. (1).** Zur Nomenklatur und Abstammung des Hausmeerschweinchens. Z. Säugetierk. 26: 108-111, 3 figs. [English summary.]
- Hückinghaus, F. (2).** Die Bedeutung der Allometrie für die Systematik der Rodentia. Z. Säugetierk. 26: 142-146, 6 figs.
- Hudson, J. W. see Bartholomew.**
- Huey, L. M.** Further northern extension of the hog-nosed skunk. J. Mammal. 42: 421.
- Huggett, A. St. G. & Nixon, D. A.** Fructose as a component of the foetal blood in several mammalian species. Nature, Lond. 190: 1209, 1 tab.
- Hulliger, L. see Hamerton.**
- Hume, C. W.** Poisoned baits for wallabies. New Scientist. 11: 737.
- Huminski, S. see Chudoba.**
- Hummel, K. P. & Chapman, D. B.** Visceral inversion and associated anomalies in the mouse. J. Hered. 50, 1959: 9-13, 3 tabs.
- Hummitzsch, E.** Fledermausbringungen in Leipzig und Umgebung. Bonn. zool. Beitr. 11 Sonderheft: 99-104, 1 fig., 3 tabs.
- Humphrey, D. C. & Spencer, N.** Chromosome number in the mink. J. Hered. 50, 1960: 245-247, 1 fig.
- Humphries, D. A.** The small mammals of Bardsey. Bardsey Observ. Rep. 1958: 42-44, 1 tab.
- Hurme, V. O. & Van Wagenen, G.** Basic data on the emergence of permanent teeth in the rhesus monkey (*Macaca mulatta*). Proc. Amer. phil. Soc. 105: 105-140, 9 figs., 22 tabs.
- Hurwitz, H. M. B. & Millenson, J. R.** Maintenance of avoidance behaviour under temporally defined contingencies. Science 133: 284-285, 2 figs.
- Hürzeler, J. see Crusafont-Pairó.**

- Husson, A. M. De zoogdieren van de Nederlandse Antillen. Fauna Nederlandse Antillen No. 2, 1960, pp. i-viii, 1-170, 27 figs., 43 pls. [Detailed English summary.]
- Ichihara, T. Blue whales in the waters around Kerguelen Island. Norak Hvalfangsttid. 50: 1-20, 9 figs., 5 tabs.
- Ilescu, O. see Gabuniya.
- Ilyichev, V. D. Some regularities in the evolution of the external ear of the vertebrates. Zool. Zh. 40: 1795-1807, 5 figs. [Russian, English summary.]
- Imaizumi, Y. Coloured illustrations of the mammals of Japan. Osaka (Hoikusha) 1960, pp. i-viii, 1-916, 68 coloured pls. [Text in Japanese.]
- Immerdorf, M. Über die Aufzucht eines Krallenaffen-Bastards aus dem Kölner Zoo. Mutter Rothand-Tamarin, *Leontocercus (Tamarin) midas* (Linné, 1758); Vater Mantelaffen, *L. (Marikina) bicolor* (Spix, 1833). Säugetierk. Mitt. 9: 145-151, 6 figs.
- Inglis, L. G. (1). A quantitative study on the activity of the dusky shrew (*Sorex vagrans obscurus*). Ecology 41, 1960: 656-660, 1 fig., 2 tabs.
- Inglis, L. G. (2). Home range and habitats of the wandering shrew. J. Mammal. 42: 455-462, 2 figs., 1 pl., 1 tab.
- Inglis, L. G. (3). Reingestion in the mountain beaver. J. Mammal. 42: 411-412, 1 pl.
- Inoue, M. Studies on peripheral blood cells of normal *Macaca* monkeys (*Macaca fuscata*). J. Primatology 1, 1958: 160. [Summary.] [In Japanese.]
- Ip, M. C. see Barker.
- Isaacson, J. H. see Falconer.
- Ichihara, Y. Studies on crystalline whale pepsin. Mem. Fac. Fish. Hokkaido Univ. 8: 1-81, 26 figs., 18 tabs.
- Ishnun, G. I. The otter in Uzbekistan. Zool. Zh. 40: 1745-1746. [Russian, English summary.]
- [Ismagilov, M. I.] [Ecology of the local rodents of Bet-Pak-Dal and the southern Pre-Balkhash]. Alma-Ata (Izdatel'stvo Akad. Nauk Kazakhskoi SSR), pp. 1-365, text illustr. [In Russian.]
- Ismagilov, M. M. On the type of settlements of *Marmota bobac* Müll. and on its action upon vegetation in the regions of the development of virgin steppe soils in Kazakhstan. Zool. Zh. 40: 905-913, 8 figs. [Russian, English summary.]
- Isogai, S. see Tokita.
- Issel, B. & Issel, W. Beringungsergebnisse an der Grossen Hufoisennase (*Rhinolophus ferrumequinum* Schreb.) in Bayern. Bonn. zool. Beitr. 11 Sonderheft: 124-142, 2 figs., 10 tabs.
- Ito, R. see Tokita.
- Itoigawa, N. Studies of behaviour in Japanese monkeys (1) Play. J. Primatology 1, 1958: 161-162. [Summary.] [In Japanese.]
- Ivanova, E. I. Body-size proportions and the growth character of the Far East whales. Trud. Sovesh. Ichtiol. Kom. No. 12: 72-78. [In Russian.]
- Jablokov, A. V. (1). Functional morphology of breathing organs of Cetacea odontoceti. Trud. Sovesh. Ichtiol. Kom. No. 12: 79-86, 3 figs. [In Russian.]
- Jablokov, A. V. (2). About the smell in marine mammals. Trud. Sovesh. Ichtiol. Kom. No. 12: 87-93, 3 figs. [In Russian.]
- Jackson, J. S. (1). Two records of grey squirrel, *Sciurus carolinensis* Gmelin, shot in counties Armagh and Monaghan. Irish Nat. J. 13: 215.
- Jackson, J. S. (2). Record of a long-eared bat, *Plecotus auritus* (Linnaeus) from County Clare. Irish Nat. J. 13: 262-263.
- Jaczewski, Z., Gill, J. & Korniewski, S. (1). Regulation of blood pressure in the brown bear. Meded. Inst. Toeg. biol. No. 50, 1960: 131-145, 12 figs.
- Jaczewski, Z., Gill, J. & Korniewski, S. (2). Capacity of the different parts of the digestive tract in the brown bear. Meded. Inst. Toeg. biol. No. 50, 1960: 146-164, 4 figs., 3 tabs.
- Jakhimovich, N. N. Remains of an Upper Pliocene large antelope. Paleont. Zh. No. 3, 1959: 142-145, 1 fig., 1 tab. [In Russian.]
- Jakobsen, A. Sealing and whaling. Tromsø Mus. Skr. 8, 1960: 209-215, 2 figs.
- Jakobsen, K. E. A Danish record of a common dolphin with deformed upper jaw. Flora og Fauna 66, 1960: 90-92, 2 figs. [Danish, English summary.]
- Jakovenko, M. Ja. Method of the age determination of *Hystriophoca groenlandica oceanica* Lepechin in connection with the determination of the fishery norm. Trud. Sovesh. Ichtiol. Kom. No. 12: 192-198, 3 figs. [In Russian.]
- Jakow, G. S. *Symbos convexifrons* an invalid species. J. Mammal. 42: 114-115. [errata corrected loc. cit. p. 429.]
- James, R. see Saunders.
- Jameson, E. W. Relationships of the red-backed voles of Japan. Pacif. Sci. 15: 594-604, 2 figs.
- Jameson, E. W. see Ota.
- Jankovic, Z. see Simic.
- Jánossy, D. Die Entwicklung der Kleinsäuger fauna Europas im Pleistozän (Insectivora, Rodentia, Lagomorpha). Z. Säugetierk. 26: 40-50, 2 figs. [English summary.]
- Jarosz, S. The fertilized egg-cell of the cow. Acta biol. cracov. (Zool.) 2, 1959 [1960]: 151-161, 1 fig., 3 pls., 2 tabs.
- Jeffers, J. N. R. see Crowcroft.
- Jelinek, A. J. A late Pleistocene vertebrate fauna from Texas. J. Paleont. 34, 1960: 933-939, 1 fig., 1 pl., 5 tabs.
- Jellison, W. L., Helminen, M. & Vinson, J. W. Presence of a pulmonary fungus in rodents in Finland. Ann. Med. exper. Fenn. 38, 4, 1960: 1-8, 3 figs.
- Jenness, R. see Sowls.
- Jennings, R. K. & Kaplan, M. A. Qualitative comparative serology. Bull. serol. Mus. No. 25: 5-8, 4 figs.
- Jennings, W. L., Schneider, N. J., Lewis, A. L. & Scatterday, J. E. Fox rabies in Florida. J. Wildl. Mgmt. 24 1960: 171-179, 1 fig., 2 tabs.
- Jenson, A. G. see Davis.
- Jerman, J. Paleohistological researches in Riss-Würm travertines in the area Hrádok-Gánovce near Poprad (Czechoslovakia). Acta Mus. nat. Prag. 16B, 1960: 125-163, 4 figs., 34 pls.

- Jewell, P. The wild sheep of St. Kilda. *New Scient.* 11: 268-271, 7 figs.
- Jewell, P. A. *see* Fullager.
- Johansen, K. Temperature regulation in the nine-banded armadillo (*Dasypus novemcinctus mexicanus*). *Physiol. zool.* 34: 126-144, 11 figs.
- Johansson, B. Brown fat and its possible significance for hibernation. *Bull. Mus. comp. Zool. Harv.* 124, 1960: 233-248, 1 tab.
- Johnen, A. G. *see* Engländer.
- Johnsen, A. O. Den moderne hvalfangets historie. Opprinnelse og utvikling. 1. Finnmarksfangstens historie 1864-1905. Oslo (H. Aschehoug & Co. (W. Nygaard)) 1959: 1-711, illustr.
- Johnson, D. R. Additional record of mountain goat in northeastern Washington. *J. Mammal.* 42: 280-281.
- Johnson, L. J. Mammal studies on the Lubrecht Forest, Montana—a preliminary report. *Proc. Mont. Acad. Sci.* 20: 40-48, 8 tabs.
- Johnson, M. L. & Benson, S. B. Relationship of the pocket-gophers of the *Thomomys mazama-talpoideus* complex in the Pacific Northwest. *Murrelet* 41 1960: 17-22, 1 fig.
- Johnson, M. L. & Clanton, C. W. Natural history of *Sorex merriami* in Washington State. *Murrelet* 35, 1964: 1-4, 1 fig.
- Johnson, M. L., Wicks, M. J. & Brenneiman, J. Serum protein electrophoresis of some boreal mammals. *Murrelet* 39, 1968: 32-36, 6 figs.
- Johnson, M. L. *see* Clanton.
- Joly, M. *see* Jullien.
- Jones, C. J. Additional records of bats in New Mexico. *J. Mammal.* 42: 538-539.
- Jones, C. J. *see* Findley.
- Jones, C. L. Additional records of shrews in New Mexico. *J. Mammal.* 42: 399.
- Jones, D. A. A salable approach to the elk-cattle competition problem. *Trans. N. Amer. Wildl. Conf.* 25 1960: 387-395, 4 figs.
- Jones, D. A. *see* Julander.
- Jones, J. K. & Cortner, G. L. The subspecific identity of the gray squirrel (*Sciurus carolinensis*) in Kansas and Nebraska. *Trans. Kans. Acad. Sci.* 63, 1960: 285-288, 1 tab.
- Jones, J. K. & Glass, B. P. The short-tailed shrew, *Blarina brevicauda*, in Oklahoma. *Southwest Nat.* 5, 1960: 136-142, 2 figs., 1 tab.
- Jones, J. K. & Long, C. A. *Sorex longirostris* in Mississippi. *J. Mammal.* 42: 252.
- Jones, J. K. & Mursaloglu, B. (1). A syntype of *Peromyscus maniculatus nebrascensis* (Coues). *Proc. Biol. Soc. Wash.* 74: 101-104, 1 tab.
- Jones, J. K. & Mursaloglu, B. (2). Geographic variation in the harvest mouse, *Reithrodontomys megalotis*, on the central Great Plains and in adjacent regions. *Univ. Kans. Publ. Mus. nat. Hist.* 14: 9-27, 1 fig., 2 tabs.
- Jones, J. K. *see* Hall.
- Jones, O. G. Some notes on the monkey. *J. Small Animal Practice* 1, 1, 1960: 32-46.
- Jones, T. Notes on bat-eating snakes. *Niger. Fld.* 26: 69-70.
- Jonge, T. E. de. Atypische Strukturvereinfachung der oberen molares. *Anat. Anz.* 109 1960: 174-191, 7 figs.
- Jonklaas, R. The vanishing dugong. *Loris* 8, 1960: 302-304.
- Jouffroy, F.-K. (1). Le squelette des membres et ses musculaires dans le genre *Lemur* L. 1. L'humérus. *Bull. Mus. Nat. Hist. nat. Paris* (2), 32, 1960: 259-288, 4 figs., 1 tab.
- Jouffroy, F. K. (2). La musculature pectorale de trois genres de lémuriformes Malgaches: *Propithecus*, *Lemur* et *Daubentonia*. Description et anatomie comparée. *Mém. Inst. sci. Madagascar* 13A, 1960: 179-194, 5 figs., 3 pls.
- Jouffroy, F.-K. (3). Remarques d'anatomie comparée à propos du faisceau scapulaire du deltoïde et du petit rond chez les insectivores et les prosimiens. *C.R. Acad. Sci. Paris* 252: 3873-3875, 1 fig.
- Jouffroy, F. K. & Lessertisseur, J. La main des lémuriens Malgaches comparée à celle des autres Primates. *Mém. Inst. sci. Madagascar* 13A, 1960: 195-219, 12 figs., 3 pls.
- Julander, O., Robinette, W. L. & Jones, D. A. Relation of summer range condition to mule deer herd productivity. *J. Wildl. Mgmt.* 25: 54-60, 4 tabs.
- Julian, R. J. *see* Ditchfield.
- Jullien, A., Cardot, J. & Joly, M. Le chat sauvage (*Felis silvestris* Brisson) dans la région de Besançon. *Bull. Soc. Hist. nat. Doubs* 62, 1960: 95-98, 2 figs.
- Jumier, B. L'élevage de la gerbille (*G. hirtipes*) au laboratoire. *Arch. Inst. Pasteur Tunis* 38: 229-239, 1 fig., 5 photos., 2 tabs. [English summary.]
- Justice, K. E. A new method for measuring home ranges of small mammals. *J. Mammal.* 42: 462-470, 2 figs., 1 pl.
- Kabitzsch, J.-F. Die Verwandtschaft vom Löwen und Tiger dargestellt in ihrem Gebiss unter Berücksichtigung der Gebisse von Jaguar und den zwei pleistozänen Grosskatzen *Felis spelaea* und *Felis atrox*. *Säugetierk. Mitt.* 8, 1960: 103-140, 23 figs.
- Kahler, O. Karl Toldt. *Säugetierk. Mitt.* 9: 130-131, 1 fig.
- Kahlke, H.-D. (1). Die neuen *Gigantopithecus*-Funde vom Leng-chai-shan, Liucheng-Distrikt, Kwangsi (Süd china). *Ürania* 21, (1), 1958: 7-10. [N.V.]
- Kahlke, H. D. (2). On the complex of the *Stegodon*-*Ailuropoda*-Fauna of Southern China and the chronological position of *Gigantopithecus blacki* v. Koenigswald. *Vertebrata Palasiatica* 1961: 83-108, 1 fig. [Chinese, English summary.]
- Kahlke, H.-D., Hu, C. K. & Chow, B. S. Zur chronologischen Stellung der südchinesischen *Gigantopithecus*-Funde. *Z. wiss. Zool.* 165: 47-56, 6 figs., 1 tab.
- Kahmann, H. & Çağlar, M. (1). Istanbul Zooloji Enstitüsünün Subat 1960. Hatay Ekskursiyonuna ait ilto rapor. *Türk. biologi Dergisi, Istanbul* 10, 1960: 45-46. [N.V.] [In Turkish.]
- Kahmann, H. & Çağlar, M. (2). Türkiye'de memeli hayvanlar arastirimi sahasinda yeni buluşlar. [New results of mammal collecting in Turkey.] *Türk. biologi Dergisi, Istanbul* 10, 1960: 119-126, 4 figs. [In Turkish.]

- Kahmann, H. & Çağlar, M. (3).** Beitrage zur Saeugetierkunde der Türkei. 1—Fledermaeue aus der Landschaft Hatay. (Eine vorlaefige Mitteilung). Rev. Fac. Sci. Univ. Istanbul (Istanbul Univ. Fak. Mecmuasi), Ser. B, 25 (1-2), 1960 : 1-21, 4 figs., 14 tabs. [English summary.]
- Kahrulin, B. E.** On the biology of *Spermophilopsis leptodactylus* Licht. Mater. Poznan. Faun. Flor. SSSR. N.S. (Zool.) 38 1960 : 165-182, 6 figs., 2 tabs., [Russian, English summary.]
- Kaiser, E. & Michl, H.** Die Biochemie der tierischen Gifte. Wien (Franz Denticke) 1958 : i-viii, 1-258, 23 figs.
- Kalabukhov, N. I.** Comparative ecology of hibernating mammals. Bull. Mus. comp. Zool. Harv. 124, 1960 : 45-74.
- Kalela, O.** Wanderungen. In Kuenthal, W. & Krumbach, T. Handbuch der Zoologie 8 Bd., 10 Teil, 3 Beitr. (27. Lief.) : 1-40, 9 figs.
- Kallen, F. C.** Vascular changes related to hibernation in the vespertilionid bat *Myotis lucifugus*. Bull. Mus. comp. Zool. Harv. 124, 1960 : 373-386, 1 fig.
- Källin, J.** Über die fossilen Primaten des Fayum (unteres Oligocaen) von Ägypten. Z. wiss. Zool. 165 : 35-46, 4 figs.
- Kamar, G. A. R.** see Badreldin.
- Kanellis, A.** see Hatzisarantis.
- [Kantorova, V. I.]** [Development of placenta in the cow]. Trud. Inst. Morf. Zhiv. 30 1960 : 101-191, 32 figs. [In Russian.]
- Kanwar, K. C.** Morphological and cytochemical studies on the Harderian glands of rats. Cellule 61, 1960 : 129-141, 1 pl.
- Kapitonov, V. J.** Ecological observations on *Ochotona hyperborea* Pall. in the lower part of the Lena river. Zool. Zh. 40 : 922-933, 6 figs., 2 tabs. [Russian, English summary.]
- Kaplan, M. A.** see Jennings.
- Kaplan, W. D.** see Ohno.
- Karapetjan, W. S.** see Gambarjan.
- Karaseva, E. V.** The peculiarities of stationial distribution of *Microtus arvalis* Pall. and the significance of various stations in its life span in the central districts of the Russian federation. Mater. Poznan. Faun. Flor. SSSR, N.S. (Zool.) No. 38, 1960 : 27-55, 14 figs., 4 tabs., [Russian, English summary.]
- Karaseva, E. V.** The action of virgin soil ploughing on the mode of life and the distribution of mouse-like rodents over the territory in North Kazakhstan. Zool. Zh. 40 : 768-773, Stabs. [Russian, English summary.]
- Karlov, N. N.** The composition and stratigraphic significance of the Romankovo Mammalian fauna. C. R. Acad. Sci. U.R.S.S. (Earth Sciences), 128, 5, 1959 : 140-143, 1 fig., 1 tab. [In Russian.] See also Translation 128, 1-6, 1960 : 837-840, 1 fig., 1 tab.
- Karschny, A.** Ein Fund von *Bison priscus* (Bojanus) (Mammalia) in Wiesbaden. Notizbl. hess. Landesamt. Bodenforsch. 88, 1960 : 63-64.
- Kasuya, T.** see Nishiwaki.
- Kasyanenko, V. G.** Principles of a phylogenetic change in the organs and their importance for the physiological essence of evolutionary transformation of the organs and systems. Zool. Zh. 40 : 1759-1769. [Russian, English summary.]
- Kawasaki, Y.** see Tokita.
- Kay, L.** Perception of distance in animal echolocation. Nature, Lond. 190 : 361-362.
- Kaye, S. V.** Movements of harvest mice tagged with gold—198. J. Mammal. 42 : 323-337, 4 figs., 1 pl.
- Kaye, S. V.** see Dunaway.
- Kayser, C. (1).** Hibernation versus hypothermia. Bull. Mus. comp. Zool. Harv. 124, 1960 : 9-30, 6 figs., 1 pl., 8 tabs.
- Kayser, C. (2).** Consommation d'oxygène et température centrale au cours de l'hiver austral de deux Insectivores de Madagascar, *Centetes caudatus* et *Setifer setosus*. C.R. Soc. Biol. Paris 154 : 1870-1876, 1 fig., 1 tab.
- Kayser, C. (3).** The physiology of natural hibernation. London (Pergamon Press) : pp. i-vii, 1-325, text illustr.
- Kayser, C.** see Weill.
- Kebbe, C. E. (1).** Muskrat migration from Klamath Marsh. Murrelet 36, 1955 : 26.
- Kebbe, C. E. (2).** Status of the opossum in Oregon. Murrelet 36, 1955 : 42.
- Kebbe, C. E. (3).** Record of white muskrat from Baker County, Oregon. Murrelet 37, 1956 : 11.
- Kebbe, C. E. (4).** Black mule deer taken in southern Oregon. Murrelet 37, 1956 : 34.
- Kehl, T. H. & Morrison, P.** Peripheral nerve function and hibernation in the thirteen-lined ground squirrel, *Spermophilus tridecemlineatus*. Bull. Mus. comp. Zool. Harv. 124, 1960 : 387-403, 6 figs., 3 tabs., 1 pl.
- Kelemen, G. & Sade, J.** The vocal organ of the howling monkey (*Alouatta palliata*). J. Morph. 107 1960 : 123-140, 11 figs.
- Kellas, L. M.** An intra-epithelial granular cell in the uterine epithelium of some ruminant species during the pregnancy cycle. Acta anat. 44 : 109-130, 13 figs.
- Kellogg, W. N.** Porpoises and sonar. Chicago (University of Chicago Press) pp. i-xiv, 1-177, 25 figs., 8 pls., 8 tabs.
- Kelsall, J. P.** Co-operative studies of barren-ground caribou 1957-58. Wildl. Mgmt. Bull. Canad. Wildl. Serv. Ottawa Ser. 1, No. 15, 1960 : 1-145, 22 tabs., 10 maps.
- Kendrew, J. C.** see Edmundson.
- Kennerly, T. E.** see Blair.
- Kenyon, K. W.** Cuvier beaked whales stranded in the Aleutian Islands. J. Mammal. 42 : 71-76, 1 fig., 2 pls., 2 tabs.
- Kenyon, K. W. & Rice, D. W.** Abundance and distribution of the Steller sea lion. J. Mammal. 42 : 223-234, 1 fig., 1 pl., 2 tabs.
- Kepka, O. (1).** Die Ergebnisse der Fledermaus-beringung in Steiermark vom Jahr 1949 bis 1960. Bonn. zool. Beitr. Sonderheft 1960 : 54-76, 2 figs., 23 tabs.
- Kepka, O. (2).** Mammalia. Chiroptera. In Anschau, M., Kepka, O. & Schuster, R. Allgemeine faunistische Nachrichten aus Steiermark (VII). Mitt. naturw. Ver. Steiermark 90, 1960 : 5-12. [Mammals p. 12].
- Kermack, K. A. & Clemens, W. A.** [Wealden mammals.] Proc. geol. Soc. Lond. No. 1588 : 90.
- Kerney, M. P.** An interglacial Tufa near Hitchin, Hertfordshire. Proc. Geol. Ass. Lond. 70, 1960 : 322-337, 2 figs., 1 pl.

- Kerr, D. I. B. *see* Clezy.
- Kerr, D. I. B. *see* Dennis.
- Kerr, W. E. *see* Pisani.
- Kerrest, J. *see* Camain.
- Kershaw, W. E. *see* Stretch.
- Khalansky, A. S. *see* Koshkina.
- Kharlamov, V. P. *see* Shura-Bura.
- Khmelevskaya, N. V. On the biology of *Ochotona alpina* Pallas. Zool. Zh. 40: 1583-1585, 1 fig., 1 tab. [Russian, English summary.]
- Khrisanfova, E. N. Evolutional changes in the ratio of cranial to facial divisions in the skulls of Hominidae. Sovet. antrop. Mosk. 2, 3, 1958: 21-34, 14 figs. [In Russian.]
- Khrisanfova, E. N. *see* Belova.
- Khomova, M. V. *see* Fateyev.
- Khusin, R. Sh. Perspectivity of the fishery development of white whale in European north. Trud. Sovesh. Ichtiol. Kom. No. 12: 133-137. [In Russian.]
- Kienzler, R. H. Spitzmäuse als Erdbeeffresser. Säugetierk. Mitt. 9: 162.
- Kieselbach, A. & Steiner, H. Zur vergleichenden und funktionellen Anatomie des Musculus biceps femoris und seiner Homologa bei Primaten. Z. wiss. Zool. 165: 88-107, 6 figs.
- Kindahl, M. (1). Some aspects of the tooth development in Soricidae. Acta Odontologica Scandinavica 17, 1959: 203-237, 18 figs.
- Kindahl, M. (2). The tooth development in *Erinaceus europaeus*. Acta Odontologica Scandinavica 17, 1959: 467-489, 8 figs.
- Kindel, F. Use of dyes to mark ruminant feces. J. Wildl. Mgmt. 24, 1960: 429.
- Kindred, B. M. Abnormal inheritance of the sex-linked tabby gene. Aust. J. biol. Sci. 14: 415-418, 2 tabs.
- King, J. A. (1). The social behaviour of prairie dogs. Sci. Amer. 201, 4, 1959: 128-140, figs.
- King, J. A. (2). The ontogeny of some locomotory and learning patterns in two subspecies of deer-mice *Peromyscus maniculatus*. Anim. Behav. 9: 114.
- King, J. A. (3). Swimming and reaction to electric shock in two subspecies of deer-mice (*Peromyscus maniculatus*) during development. Anim. Behav. 9: 142-150, 6 figs., 4 tabs.
- King, J. A. & Eleftherion, B. E. Differential growth in the skulls of two sub-species of deer-mice. Growth 24, 1960: 179-192, 5 figs.
- King, J. A. & Shea, N. J. Subspecific differences in the responses of young deer-mice on an elevated maze. J. Hered. 50, 1959: 14-18, 1 fig., 1 tab.
- King, J. E. (1). Notes on the pinnipeds from Japan described by Temminck in 1844. Zool. Meded. Leiden 37: 211-224, 5 pls., 7 tabs.
- King, J. E. (2). The feeding mechanism and jaws of the crab-eater seal (*Lobodon carcinophagus*). Mammalia, Paris 25: 462-466, 3 figs.
- King, J. E. & Harrison, R. J. Some notes on the Hawaiian monk seal. Pacif. Sci. 15: 282-293, 6 figs., 2 tabs.
- Kinoshita, E. & Maeda, M. Field experiments on the biology of field mice in the woodland. Bull. Govt. Forest Exp. Station, Tokyo, No. 127: 61-98, 13 figs., 2 pls., 17 tabs. [Japanese, English summary.]
- Kinosita, R. *see* Ohno.
- Kinsey, C. Leopard frog attacks bat. J. Mammal. 42: 408.
- Kirschhofer, R. Hirschferkel und andere primitive Hirsche. Kosmos, Stuttgart 57: 76-81, 10 figs.
- Kirk-Greene, A. H. M. The Bornu stud farm. Niger. Fld. 26, 1: 4-9, 1 fig.
- Kirkpatrick, C. M. & Hoffman, R. A. Ages and reproductive cycles in a male gray squirrel population. J. Wildl. Mgmt. 24 1960: 218-221, 1 fig. 2 tabs.
- Kirkpatrick, C. M. *see* Hoffman.
- Kirkpatrick, R. D. (1). The introduction of the San Juan rabbit (*Oryctolagus cuniculus*) in Indiana. Proc. Ind. Acad. Sci. 69, 1960: 320-324, 1 tab.
- Kirkpatrick, R. D. (2). New observations of Indiana swamp rabbits. J. Mammal. 42: 99-100.
- Kirpichnikov, A. A. Essay of the history of the studying of marine mammals of Sarmata deposit and adjoining countries. Trud. Sovesh. Ichtiol. Kom. No. 12: 25-39. [In Russian.]
- Kitchener, H. J. (1). The dog-faced fruit bat (*Cynopterus horsfieldi lyoni*). J. Darjeeling nat. Hist. Soc. 31: 1-4, 2 pls.
- Kitchener, H. J. (2). Wild life flash photography. Malay Nat. J. 15: 20-35, 11 pls.
- Kitchener, H. J. (3). The sambar deer—*Cervus unicolor equinus*. Malay. Nat. J. 15: 52-61, 2 pls.
- Kitchener, H. J. (4). A bleak prospect for the seladang or Malayan gaur. Nature Conservation in Western Malaysia, 1961. Malay. Nat. J. 21st Anniv. Spec. Issue: 197-201, 1 pl.
- Kitchener, H. J. (5). The importance of protecting the Malayan tiger. Nature Conservation in Western Malaysia, 1961. Malay. Nat. J. 21st Anniv. Spec. Issue: 202-206, 1 pl.
- [Kitchina, M. M.] [On the influence of cobalt on body weight and the content of proteins in rabbit]. Vestn. Akad. Nauk. Beloruss. SSR. biol. No. 1: 98-104, 1 fig., 4 tabs. [In Byelorussian.]
- Kitts, D. B. A sabre-tooth cat, *Smilodon californicus* Bovard, from Logan County, Oklahoma. Oklahoma Geology Notes 18, 1958: 19-23, 3 figs.
- Kitts, D. B. & Myers, A. J. A Pliocene badger, *Pliotaxidea nevadensis* (Butterworth) from Harper County, Oklahoma. Oklahoma Geology Notes 19, 1959: 143-146, 2 figs., 1 tab.
- Kitts, W. D. *see* Currier.
- Klein, D. R. & Olson, S. T. Natural mortality patterns of deer in south east Alaska. J. Wildl. Mgmt. 24 1960: 80-88, 1 fig., 4 tabs.
- Klein, H. G. Ecological relationships of *Peromyscus leucopus noveboracensis* and *P. maniculatus gracilis* in central New York. Ecol. Monogr. 30, 1960: 337-407, 7 figs., 14 tabs.
- [Kleinenberg, S. E.] (1). [Mammals of the Black and Azov Seas: a biological and economic investigation.] Moscow (Izdatel'stvo Akad. Nauk SSSR) 1956: 1-288, text illustr. [In Russian.]

- Kleinenberg, S. E. (2).** Study of marine mammals in the USSR and the basic orientations of seven year plan investigations. Trud. Sovesh. Ikhtiol. Kom. No. 12: 7-13. [In Russian.]
- Klemmer, K.** see Felten.
- Klinger, H. P.** see Hamerton.
- Knorre, D. von.** Zur Kleinsäuger-Fauna des Spree-waldes und seines südlichen Vorgeländes. Z. Säugetierk. 26: 183-187, 1 fig., 1 tab. [English summary.]
- Knowlton, F. F.** Food habits, movements and populations of moose in the Gravelly Mountains, Montana. J. Wildl. Mgmt. 24 1960: 162-170, 2 figs., 4 tabs.
- Knudsen, O.** Prophase bouquets in the first meiotic division studied in bulls with and without general anaesthesia. Hereditas 47: 304-308, 4 figs.
- Koby, F.-E. (1).** Les léporides magdaléniens de la grotte de la Vache. Bull. Soc. préhist. l'Ariège 13, 1958: 49. [N.V.]
- Koby, F.-E. (2).** Contribution à la connaissance des lièvres fossiles, principalement de ceux de la dernière glaciation. Verh. naturf. Ges. Basel 71, 1960: 149-173, 6 figs.
- Koby, F.-E. (3).** Découverte dans le paléolithique français de *Felis (Catolynx) chaus* Guild. Ecl. geol. helv. 53 (1960) 1961: 829-831, 1 fig.
- Koch, J. H. & Turner, H. N.** Studies on the sodium-potassium balance in erythrocytes of Australian Merino sheep. I. Changes in concentrations in the erythrocytes of lambs from birth to 98 days. Aust. J. biol. Sci. 14: 79-86, 1 fig., 2 tabs.
- Koch, J. H.** see Turner.
- Koch, T.** Zur Geschichte des Pferdes. Ein Lesebüch-lein für meine Studenten. Jena (VEB Gustav Fischer Verlag) pp. i-ix, 1-108, text illustr.
- Kochetkova, V. I. (1).** Mode of reconstruction of encephalon lobes of the fossil hominid's brain by way of measuring the endocran casts. Vopros. antrop. Mosk. No. 3, 1960: 33-45, 2 figs. [In Russian.]
- Kochetkova, V. I. (2).** A quantitative description of brain variability in fossil hominids as shown by cranial casts. Vopros. antrop. Mosk. No. 6: 3-20, 9 figs. [In Russian.]
- Kochetkova, V. I. (3).** Evolution of specific human areas in the brain cortex of hominids. Vopros. antrop. Mosk. No. 7: 14-22, 6 figs. [In Russian.]
- Kocher, W.** see Dens.
- Kock, D. & Schomber, H. W. (1).** Beitrag zur Kenntnis der Verbreitung und des Bestandes des Atlaschirches (*Cervus elaphus barbarus*) sowie eine Bemerkung zu seiner Geweihsbildung. Säugetierk. Mitt. 9: 51-54, 5 figs.
- Kock, D. & Schomber, H.-W. (2)** Beitrag zur Kenntnis der Lebens- und Verhaltungsweise des Gundi, *Otendactylus gundi* (Rothmann, 1776). Säugetierk. Mitt. 9: 165-166, 1 fig.
- Kock, D.** see Schomber.
- Kodachova, K. S.** see Formosov.
- Koenigswald, G. H. R. von.** Fossil cats from the Tegelen clay. Publ. natuurk. Genootsch. Limburg No. 12: 19-27, 8 figs., 1 pl., 2 tabs.
- Koenigswald, G. H. R. & Crusafont Pairo, M.** Nuevos yacimientos de mamíferos en la subdepression de Calatayud. Notas Inst. geol. Esp. 61: 109-114. [English summary.]
- Koenigswald, G. H. R. von., Gentner, W. & Lippolt, H. J.** Age of the basalt flow at Olduva. East Africa. Nature, Lond., 192: 720-721, 1 tab.
- Kotford, C. B. (1).** The vicuña. Oryx 6: 43-52, 1 pl.
- Kotford, C. B. (2).** The prairie dog of the North American Plains, and its relations with plants, soil, and land use. Terre et la Vie 108: 327-341, 1 pl.
- Kotford, C. B. (3).** The ecology and management of the vicuña in the puna zone of Peru. Terre et la Vie 108: 342-353, 1 fig., 1 pl.
- Koldovský, O.** see Vacek.
- Komardina, M. G.** see Krilova.
- Komuro, H.** see Kubota.
- Kondakov, N. N.** To the systematics of Baikal seal. Trud. Sovesh. Ikhtiol. Kom. No. 12: 211-213, 1 fig. [In Russian.]
- König, C. & König, I.** Zur Kenntnis der mediterranen Kleinwühlmaus *Pitymys duodecimcostatus* (de Selys-Longchamps 1839) in der Provence. Zool. Anz. 166: 32-42, 6 figs., 2 tabs.
- Konopacka, B.** Lipids in the intestine epithelium of domestic pig embryos. Folia morph., Warszawa 11 1960: 247-250, 3 pls. [Polish, English summary.]
- Koopman, K. F.** A collection of bats from Sinaloa, with remarks on the limits of the Neotropical Region in northwestern Mexico. J. Mammal. 42: 536-537, 1 tab.
- Kootcherok, V. V.** Burrows as means of protection against the unfavourable effect of abiotic environmental factors. Mater. Poznan. Faun. Flor. SSSR, N.S. (Zool.) No. 38 1960: 56-95, 8 figs., 3 tabs. [Russian, English summary.]
- Korda, P.** see Gill.
- Korenberg, E. J. & Semenova, I. P.** On the epizootology of leptospirosis among insectivorous animals. Zool. Zh. 40: 942-945, 2 tabs. [Russian, English summary.]
- Kortembout van der Sluijs, G.** The fossil tapir of Maalbeek, Netherlands. Publ. naturh. Genootsch. Limburg No. 12: 12-18, 1 pl., 2 tabs.
- Korzhuev, P. A. & Nikol'skaya, I. S.** The amount of bone marrow in reindeer. Dokl. Akad. Nauk SSSR (Tranl.) Biol. Sci. 134: 794-796, 1 tab. [Russian original pp. 225-228.]
- Koshkina, T. V. & Klalansky, A. S.** The age variation in the skull of the Norwegian lemming and the population composition analysis in this species. Byull. Mosk. Obshch. Isp. Priro. Otd. Biol. 66 (2): 3-14, 5 figs., 3 tabs. [Russian, English summary.]
- Kostrůn, K.** Fetussorption in red deer. Sborn. Vys. Škol. Zem. Brně (C) 1960: 135-140, 1 fig. [English summary.]
- Kotarba, I.** Breeding of Himalayan bear in Opole Zoo. Przegl. Zool. 5: 267-271, 4 figs., 1 tab.
- Kotov., V. L.** State and tasks of marine mammals' fishery regulation in the waters of USSR and adjoining countries. Trud. Sovesh. Ikhtiol. Kom. No. 12: 14-17. [In Russian.]
- Kowalska, K. & Miklaszewski-Mrocakowska, A.** Benedykt Dybowski. Materiały biograficzno-bibliograficzne. Mem. zool. Akad. Nauk. Warsaw 5, 1960: 1-97.

- Kowalska, Z. & Woliński, Z.** Observations on biology of hyaena dogs, *Lycan pictus* (L.) in conditions of captivity. *Przegl. zool.* 5: 152-162, 8 figs., 4 tabs. [Polish, English summary.]
- Kowalska-Dyrcz, A.** Seasonal variations in *Sorex araneus* Linnaeus 1758 in Poland. *Acta Theriologica* 4: 268-273, 3 figs., 4 tabs.
- Kowalski, K. (1).** Pliocene insectivores and rodents from Rebiechice Królewskie (Poland). *Acta zool. cracov.* 5, 1960: 155-201, 8 figs., 3 pls.
- Kowalski, K. (2).** Cricetidae and Microtidae (Rodentia) from the Pliocene of Weże (Poland). *Acta zool. cracov.* 5, 1960: 447-505, 10 figs., 7 pls.
- Kowalski, K. (3).** *Pitymys* McMurtrie 1831 (Microtidae, Rodentia) in the Northern Carpathians. *Acta Theriologica* 4: 1960: 81-91, 2 figs., 3 tabs.
- Kowalski, K. (4).** Pleistocene rodents from Nietopierzowa Cave in Poland. *Folia Quaternaria* 5: 1-22, 1 fig., 2 tabs. [Polish, English summary.]
- Kowalski, K. (5).** Small mammals from "Puszcza Piaska" in northern Poland. *Acta Theriologica* 4: 295-296.
- Kowalski, K. (6).** The problem of the faunal relations between Europe and North America in the light of new zoogeographical and paleontological investigations. *Przegl. zool.* 5: 29-33. [Polish, English summary.]
- [Koshar, L. L.]** [Morphology and distribution of endothelium in pectoral lymphatic system in horse.] *Vet. Akad. Nauk. Beloruss. SSR biol. No. 1*: 93-97, 3 figs. [In Byelorussian.]
- Koshevnikova, R. K.** see Voronov.
- Kozicky, E.** see Madson.
- Koniewski, S.** see Jaczewski.
- Kraft, V. A.** Migrations of water voles (*Arvicola terrestris* L.) and their role in the formation of epizootics of tularemia. *Zool. Zh.* 40: 1883-1890, 2 figs., 2 tabs. [Russian, English summary.]
- Kraglievich, J. L. (1).** Sobre la presencia de *Carolozittelia cf. tapiroides* Ameghino, en La Fm. La Balsa de Neuquén. *Ameghiniana* 1, 3, 1957: 22-26, 3 figs.
- Kraglievich, J. L. (2).** Revisión de los Roedores extinguidos del género "*Eumysops*" Ameghino, 1888. (Nota preliminar). *Ameghiniana* 1, 3, 1957: 37-39.
- Kraglievich, J. L. (3).** Marsupiales tilacosmilinos de la fauna de Chapadmalal. *Publ. Mus. Cienc. nat. Mar del Plata* 1, 1960: 53-72, 5 figs., 2 tabs. [English summary.]
- Kraglievich, J. L. (4).** Un nuevo roedor octodontido del Eocartario de Salinas Chicas (Prov. de Buenos Aires). *Rev. Asoc. geol. argent.* 15: 15-40, 3 figs., 4 tabs. [English summary.]
- Kramer, G.** Beobachtungen an einem von uns aufgezogenen Wolf. *Z. Tierpsychol.* 18: 91-109, 14 figs.
- Kramp, P.** Blutgruppen und Blutfaktoren. (In *Hofer, and others. Primatologia. Handbook of Primatology.* 3, (2), 1960. Blut- und Kreislauforgane. pp. 88-162, 2 figs., 26 tabs.)
- Krantz, G. S.** Pithecanthropine brain size and its cultural consequences. *Man* 61: 85-87, 1 fig.
- Krasovsky, L. I.** see Alexandrova.
- Krbek, F.** Zur Faserstruktur von Pia mater und Ligamentum denticulatum beim Rückenmark des Meer-schweinchens. *Anat. Anz.* 109: 170-173, 1 fig.
- Krieg, H. & Rahm, U.** Das Verhalten der Xenarthren (Ameisenbären, Faultiere und Gürteltiere) und Das Verhalten der Schuppentiere. In *Kukenthal, W. & Krumbach, T. Handbuch der Zoologie* 8 Bd., 10 Teil, 12 Beitr. (27 Lief.): 1-48, 30 figs.
- Kriegel, H.** Das biologische Verhalten radioaktiver Spaltprodukte bei trächtigen Säugetieren. *Verh. dtsch. zool. Ges.* 1960 (1961): 238-244, 4 figs.
- Krilo, K. T., Varshavsky, S. N., Shilova, E. S., Shilov, M. N., Padlesskii, G. I. & Komardina, M. G.** Peculiarities of interspecific contacts in the settlements of *Rhombomys opimus* Licht. on North Aral Territory. *Zool. Zh.* 40 (3), 1961: 434-446, 4 figs., 2 tabs. [Russian, English summary.]
- Krishna, D. & Prakash, I.** A note on the mammals of the desert of Rajasthan, India. *Res. J. Hindi Sci. Acad.* 3, 1960: 203-214, 5 figs. [Hindi, English summary.]
- Kristjansson, F. K.** Genetic control of three hapto-globins in pigs. *Genetics* 46: 907-910, 1 fig., 1 tab.
- Kristofferson, R.** Hibernation of the hedgehog (*Erinaceus europaeus*). The ATP and O-phosphate levels in blood and various tissues of hibernating and non-hibernating animals. *Ann. Acad. Sci. fenn.* 4A, 50: 1-45, 9 tabs., 2 appendices.
- Kritskaya, T. I.** The role of the raccoon-like dog (*Nyctereutes procyonoides*) in the biocenoses of the Manych steppe. *Zool. Zh.* 40: 788-790, 1 tab. [Russian, English summary.]
- Krott, P.** Der gefährliche Braunbär (*Ursus arctos* L. 1758). *Z. Tierpsychol.* 18: 245-256, 5 figs. [English summary.]
- Krüger, H.** Über die Vater-Pacini'schen Körperchen der Baucheingeweide der Katze. *Anat. Anz.* 109: 311-333, 4 figs.
- Krumbiegel, I.** Einfarbigkeit als Rückbildungsvorgang, nach einer Beobachtung am Grantzebra (*Hippotigris quagga granti*). *Säugetierk. Mitt.* 9: 1-3, 5 figs.
- Kruszewski, St.** see Wieckowska.
- Krutzsch, P. H.** A summer colony of male little brown bats. *J. Mammal.* 42: 529-530.
- Krutzsch, P. H. & Wells, W. W.** Androgenic activity in the interscapular brown adipose tissue of the male hibernating bat (*Myotis lucifugus*). *Proc. Soc. exp. Biol. Med.* 105, 1960: 578-581, 1 fig., 1 tab.
- Krysiak, K.** The department of animal anatomy of the central school of Agriculture, Warsaw. *Acta Theriologica* 4: 297-301.
- Krzanowski, A. (1).** Investigations of flights of Polish bats, mainly *Myotis myotis* (Borkhausen 1797). *Acta Theriologica* 4: 1960: 175-184, 2 tabs.
- Krzanowski, A. (2).** Weight dynamics of bats wintering in the cave at Pulawy (Poland). *Acta Theriologica* 5: 249-264, 4 figs., 9 tabs.
- Kubota, K., Komuro, H., Nagasaki, F., Tsuboi, M., & Matsumoto, K. (1).** The eruption and shedding of teeth in the fur seal. *Okajimas Folia Anat. Jap.* 37: 331-337, 4 figs., 3 tabs.
- Kubota, K., Komuro, H., Nagasaki, F., Tsuboi, M., & Matsumoto, K. (2).** The calcification of teeth of the fur seals (roentgenographic examination). *Okajimas Folia Anat. Jap.* 37: 389-419, 12 pls.
- Küenzl, W. (1).** Vivienne Goehen-von Wattenwyl. *Mitt. Naturf. Ges. Bern, N.F.* 16, 1958: 115-116, 1 pl.

- Küenzi, W. (2).** Zweiter Bericht über das Gefangen-schaffeleben unseres Springtamarins (*Callimico goeldii* Thos.). Mitt. naturf. Ges. Bern. N.F. 18, 1960 : xxxv-xxxvi.
- Kugler, J. H.** see McMinn.
- Kühme, W.** Beobachtungen am afrikanischen Elefanten (*Loxodonta africana* Blumenbach 1797) in Gefangenschaft. Z. Tierpsychol. 18 : 285-296, 11 figs. [English summary.]
- Kühn, H. & Oberröder, C.** Beitrag zur makroskopischen Anatomie der Rückenmarkshäute des Schafes (*Ovis aries*). Anat. Anz. 109 : 444-457, 1 fig., 3 tabs.
- Kuhn, H.-J.** Genetta (*Paragenetta*) lehmanni, eine neue Schleichkatze aus Liberia. Säugetierk. Mitt. 8, 1960 : 154-160, 12 figs., 1 tab.
- Kühne, W. G. (1).** Eine Mammaliafauna aus dem Kimeridge Portugals. Neues Jb. Geol. Paläont. Monatshefte 7 : 374-381, 4 figs.
- Kühne, W. G. (2).** A mammalian fauna from the Kimmeridgian of Portugal. Nature. Lond. 192 : 274-275, 2 figs.
- Kuksova, M. I. (1).** Cutting of deciduous teeth by hamadryas baboons. Sovet. antrop. Mosk. 2, 1, 1958 : 17-21, 3 tabs. [In Russian.]
- Kuksova, M. I. (2).** Postembryonic changes in the blood composition of rhesus monkeys and hamadryas baboons. Sovet. antrop. Mosk. 2, 2, 1958 : 35-53, 3 figs., 11 tabs. [In Russian.]
- [Kuliev, G. K.] (1).** [Structure of the skin in the newly born lambs of Azerbaidjan mountain merino, bozakh and their cross-breed]. Izvest. Akad. Nauk. Azerbaid. S.S.R. No. 1 : 47-57, 7 figs., 5 tabs. [In Russian.]
- [Kuliev, G. K.] (2).** [Growth and development of some systems and of internal organs in Azerbaidjan mountain merino lamb and its cross-breed under different conditions of maintenance]. Izvest. Akad. Nauk. Azerbaidj. S.S.R. No. 4 : 49-55 3, tabs. [In Russian.]
- Kulik, I. L. & Nikitina, N. A.** Fauna of small mammals of the forest zone in Komi Republic. Byull. Mosk. Obsheh. Isp. Priv. Otd. Biol. 65, 1960 : 3-16, 9 tabs. [Russian, English summary.]
- Kulikova, V. G.** [Influence of the incorporated Cerium-144 on fecundity of mice and the development of progeny]. Trud. Inst. Biol. Akad. Nauk. Ural Filial 12, 1960 : 34-45, 9 figs., 5 tabs. [In Russian.]
- Kummer, H.** see Hediger.
- Kurec, M.** A comparative study of the spontaneous activity of the white rat and the brown or wharf rat. Acta Biol. Acad. Sci. hung. 11, 1960 : 271-283, 10 figs., 2 tabs.
- [Kurnosov, K. M.]** [Anatomical and histological investigation of the development of the dorsal muscles and the anterior extremity in cows]. Trud. Inst. Morf. Zhiv. 29, 1960 : 14-33, 7 figs. [In Russian.]
- Kurkov, A. N.** An interesting case of flight of *Vesperilio murinus* L. Zool. Zh. 40 : 1108-1109. [Russian, English summary.]
- Kurtén, B. (1).** The age of the Australopithecinae. Acta Univ. Stockholm. geol. 6, 2, 1960 : 9-22, 2 figs., 2 tabs.
- Kurtén, B. (2).** A skull of the grizzly bear (*Ursus arctos* L.) from Pit 10, Rancho La Brea. Contr. Sci. Los Angeles Cty. Mus. No. 39, 1960 : 1-6, 1 fig., 1 pl., 1 tab.
- Kurtén, B. (3).** Faunal turnover dates for the Pleistocene and late Pliocene. Comment. biol. Helsingf. 22, 5 : 1-14, 9 tabs.
- Kuss, S. E.** Eine neuentdeckte Säugetierfauna aus dem Aquitan von Büchelberg in der Pfalz. Notizbl. hess. Landesamt. Bodenforsch. 88, 1960 : 29-62, 2 figs., 5 pls.
- Kustaloglu, O. A.** Australopithecus and Paranthropus dentitions. Southwest. J. anthrop. 17 : 226-238, 1 pl.
- Kuster, A.** see Burckhardt.
- Lack, C. P.** see Harthoorn.
- LaFave, L. D.** Sharp-skinned hawk attacks bobcat. Murrelet 36, 1955 : 34.
- Lakin, G. F. (1).** Postembryonic changes of the body proportions on monkeys. Sovet. antrop. Mosk. 2, 2, 1958 : 21-33, 4 figs., 4 tabs. [In Russian.]
- Lakin, G. F. (2).** Length of the gestation period in mantled baboons and some other lower monkeys. Sovet. antrop. Mosk. 3, 1, 1959 : 49-55, 3 tabs. [In Russian.]
- Lami, R.** Le dauphin de Rizzo, *Grampus griseus* Cuv., au Cap Fréhel. Penn ar Bed N.S. 3 : 102.
- Lamprey, H. F.** see Talbot.
- Landau, B. R. & Dawe, A. R.** Observations on a colony of captive ground squirrels through the year. Bull. Mus. comp. Zool. Harv. 124, 1960 : 173-191, 6 figs., 1 tab.
- Lang, E. M.** see Hamerton.
- Lange, K.** Die Entwicklung der Rippenknorpelgelenke beim Schwein. Anat. Anz. 108, 1960 : 172-201, 11 figs., 1 tab.
- Lange, K. I.** Mammals of the Santa Catalina Mountains, Arizona. Amer. midl. Nat. 64, 1960 : 436-458, 1 tab.
- Lanza, B.** Alcune particolarità delle pliche palatine e dell'accrescimento postembrionale del cranio in *Epomophorus* (Mamm.; Megachiroptera). Monit. zool. ital. 68, 1960 (1961) : 170-184, 6 figs., 4 tabs. [English summary.]
- Larina, N. I. & Golikova, V. L.** The study of the ovarian cycle in *Silvius* females under natural conditions. Mater. Poznan. Faun. Flor. SSSR, N.S. (Zool.), No. 38, 1960 : 97-110, 6 figs., 3 tabs. [Russian, English summary.]
- Larson, S.** On the influence of the arctic fox *Alopex lagopus* on the distribution of Arctic birds. Oikos 11, 1960 : 276-305, 1 fig.
- Larson, K.** Effects of enforced intervals on the mating behaviour of rats of different ages. Z. Tierpsychol. 17, 1960 : 547-551, 1 fig., 2 tabs.
- Lashkow, V. F.** Materials to the comparative histology of the afferent innervation of the larynx of man and some mammals. Sovet. antrop. Mosk. 2, 2, 1958 : 141-146, 3 figs. [In Russian.]
- Lauder, I. M.** Tuberculosis in dogs and cats. Symp. zool. Soc. Lond. No. 4 : 37-44, 4 tabs.
- Laughlin, H. E.** see Wilks.
- Lavrov, L. S. & Hao-chuang, L.** Present conditions and ecological peculiarities of beaver (*Castor fiber* L.) natural colonies in Asia. Vestn. lenigr. Univ. No. 9 : 72-89, 5 figs. [Russian, English summary.]

- Lavrov, N. P.** Selections from "Acclimatization of muskrats in the USSR". Transl. russ. Game Rep., Ottawa, 7 1960, p. i-iii, 1-150, text illust.
- Laws, R. M. (1).** Problems of whale conservation. Trans. N. Amer. Wildl. Conf. 25, 1960: 304-319, 3 figs., 2 tabs.
- Laws, R. M. (2).** Laminated structure of bones from some marine mammals. Norsk Hvalfangsttid. 50: 116-117, 1 fig.
- Laws, R. M. (3).** Reproduction, growth and age of southern fin whales. Discovery Rep. 31: 327-486, 60 figs., 4 pls.
- Lawson, F. A.** see Russell.
- Layne, J. N.** Feeding adaptations and behaviour of a freshwater dolphin, *Inia geoffrensis*. Anat. Rec. 134, 1959: 598. [Abstr.]
- Leakey, L. (1).** Problems relating to fossil man. Leech, Johannesburg 28, 1958: 116-119. [N.V.]
- Leakey, L. S. B. (2).** New finds at Olduvai Gorge. Nature, Lond. 189: 649-650, 4 figs.
- Leakey, L. S. B. (3).** The juvenile mandible from Olduvai. Nature, Lond. 191: 417-418, 1 fig.
- Leakey, L. S. B. (4).** The age of *Zinjanthropus*. New Scientist. 12: 501.
- Leakey, L. S. B., Evernden, J. F. & Curtis, G. H.** Age of Bed I, Olduvai Gorge, Tanganyika. Nature, Lond. 191: 478-479, 1 tab.
- Leaming, D. B. & Cauna, N.** A qualitative and quantitative study of the myenteric plexus of the small intestine of the cat. J. Anat. Lond. 95: 160-169, 2 figs., 2 pls.
- Lecyk, M. (1).** Seasonal changes in the epididymis of the field vole *Microtus arvalis* Pall. Zool. Polon. 10, 1959-60, [1961]: 173-182, 1 tab.
- Lecyk, M. (2).** The possibility of superfetation in *Microtus arvalis* Pall. Zool. Polon. 10 1959-1960 [1961]: 325-327, 1 pl.
- Lee, M. R.** Montane mammals of southeastern Utah—with emphasis on the effects of past climates upon occurrence and differentiation. Bull. Univ. Utah 52, 27: 194-195. [Abstr.]
- Lee, M. R. & Durrant, S. D. (1).** A new long-tailed vole (*Microtus longicaudus* (Merriam)) from Utah. Proc. biol. Soc. Wash. 73, 1960: 167-170, 1 tab.
- Lee, M. R. & Durrant, S. D. (2).** A new jumping mouse (*Zapus princeps* Allen) from Utah. Proc. biol. Soc. Wash. 73, 1960: 171-174.
- Lee, Y. C.** see Chow.
- Legait, H. & Roux, M.** Importance variable de la pars intermedia chez les rongeurs et résistance différente aux cours d'épreuves de déshydratation. C.R. Soc. Biol. Paris 155: 379-381.
- Legrand, C. D.** Comunidades psamofílicas de la Región de carrasco (Uruguay). An. Mus. Hist. nat. Montevideo (2) 6, 7, 1959: 1-65, 22 pls. [Mammals p. 53].
- Le Gros Clark, W. F.** Early hominids. New Scientist. 9: 700.
- Lehmann, E. von (1).** Entstehung und Auswirkung der Kontaktzone zwischen dem Europäischen und Sibirischen Reh. Säugetierk. Mitt. 8, 1960: 97-102.
- Lehmann, E. von (2).** Die Unterarten von *Desmodillus auricularis* (A. Smith, 1834) in SW-Afrika. Säugetierk. Mitt. 8, 1960: 161.
- Lehmann, E. von (3).** Über die Kleinsäuger der La Sila (Kalabrien). Zool. Anz. 167: 214-229, 2 figs.
- Lehmann, E. von (4).** *Apodemus tauricus geminae* asp. nova—eine neue Unterart der Gelbhalsmaus. In Lehmann, E. von, Über die Kleinsäuger der La Sila (Kalabrien). [pp. 228-229.] Zool. Anz. 167: 214-229, 2 figs.
- [Leibman, K. I.]** [New discovery of *Elephas* in Podol Territory.] Byull. Kom. Izuch. Chetvert. Perioda 24, 1960: 100-103, 1 fig., 1 tab. [In Russian.]
- Leivestad, H.** see Eliassen.
- Lemke, C. W. & Thompson, D. R.** Evaluation of a fox population index. J. Wildl. Mgmt. 24 1960: 406-412, 7 figs., 3 tabs.
- Lennerstedt, I.** see Ahlén.
- Lensink, B. M.** see Wijngaarden.
- Leonardi, P.** Nuovi problemi relativi all'Uomo fossile. An. Univ. Ferrara N.S. Pal. umana e palet. 1, 1960: 49-87, 28 figs. [English summary.]
- Leontyeva, M. N.** On the reproduction of *Rhombomys opimus* Licht. Zool. Zh. 40: 1874-1883, 2 figs., 3 tabs. [Russian, English summary.]
- Lerma, B.** de see Arvy.
- Lessertisseur, J.** see Jouffroy.
- Le Sturgeon, W. L.** see Spalding.
- Levan, A. & Hsu, T. C.** Repeated endoreduplication in a mouse cell. Hereditas 47: 69-71, 2 figs.
- Lever, J. D. & Esterhuizen, A. C.** Fine structure of the arteriolar nerves in the guinea pig pancreas. Nature, Lond. 192: 566-567, 3 figs.
- Levi-Montalcini, R. & Angeletti, P. U.** Growth control of the sympathetic system by a specific protein factor. Quart. Rev. Biol. 36: 108-99, 16 figs., 2 tabs.
- Levin, M. G. & Alekseeva, L. W.** Atlanto-scapular muscles in primates. Vopros. antrop. Mosk. No. 1, 1960: 81-87. [In Russian.]
- Lewis, A. L.** see Jennings.
- Lewis, R. E.** see Harrison.
- Leytham, G. W. H.** see Stretch.
- Lid, C-H.** Mechanism of fibrillation potentials in denervated mammalian skeletal muscle. Science 132, 1960: 1889-1890.
- Li, Y.** A Pleistocene mammalian locality in the Likang Basin, Yunnan. Vertebrata Palasiatica 1961: 143-149, 4 figs. [Chinese, English summary.]
- Libby, W. L.** Occurrence of "Samson" condition in marten. J. Mammal. 42: 112.
- Lidicker, W. Z. (1).** A new subspecies of the cliff chipmunk from central Chihuahua. Proc. biol. Soc. Wash. 73, 1960: 267-273, 3 tabs.
- Lidicker, W. Z. (2).** Two southern range extensions in Chihuahua. J. Mammal. 42: 281.
- Lierse, W. (1).** Der Mechanismus der Nickhautbewegung des Kanichens. Anat. Anz. 109, 1960: 1-6, 5 figs.
- Lierse, W. (2).** Die Gefäßversorgung der Stammganglien im Gehirn der Katze. Anat. Anz. 109: 358-368, 7 figs.
- Lillie, R. D. & Yamada, H.** On the yellow brown pigments of the substantia nigra, locus caeruleus and dorsal vagus nucleus of a monkey (*Macaca mulatta*). Okajimas Folia Anat. Jap. 36 1960: 181-183.

- Lim, B. L. & Rahman bin Omar, I. A. Observations on the habits in captivity of two species of wild cats, the leopard cat and the flat-headed cat. *Malay Nat. J.* 15 : 48-51, 2 pls.
- Limbaugh, C. Observations on the California sea otter. *J. Mammal.* 42 : 271-273.
- Lin, C.-K. & Yen, Y. Diffused hyperostosis in a deer antler. *Vertebrata Palasiatica* 1961 : 130-138, 4 pls. [Chinese, English summary.]
- Lindberg, K. Recherches biospéologiques en Afghanistan. *Acta Univ. lund. Avd. 2. N.F. 57*, 1 : 1-39.
- Lindenlaub, E. Neue Befunde über die Anfangsorientierung von Mäusen. *Z. Tierpsychol.* 17, 1960 : 555-578, 20 figs., 7 tabs.
- Lindop, P. J. & Rothblat, J. Long term effects of a single whole-body exposure of mice to ionizing radiations. I. Life-shortening pp. 332-349, 12 figs., 6 tabs. II. Causes of death pp. 350-368, 8 figs., 8 tabs. *Proc. roy. Soc.* 154B.
- Lindgren, E. Natural history notes from Jigalong. V. Aboriginal flora and fauna names. *W. Aust. Nat.* 7 : 195-201.
- Lindsey, G., Winston, H. & Manosevitz, M. Social dominance in inbred mouse strains. *Nature, Lond.* 191 : 474-475, 1 tab.
- Lindsey, J. S. Leonard Meese Llewellyn 1907-1960. *J. Wildl. Mgmt.* 25 : 351, 1 fig.
- Ling, H. Über den Naturschutz unserer Grosssäugetiere. *Abika Loodos. Tartu No.* 43, 1960 : 22-34, 4 figs. [In Estonian.]
- Lipkow, J. Die Wirkung von Sexualhormonen auf die Trächtigkeit der weissen Maus. *Säugetierk. Mitt.* 9 : 54-56, 1 tab.
- Lippold, A. *see* Stains.
- Lippold, H. J. *see* Gentner.
- Lithgow, T. The possible extinction of rhino at the Ngorongoro crater. *Afr. Wild Life* 15 : 162-165, 2 figs.
- Litvinov, N. J. A new subspecies of the vole *Akkola argentatus* sev. (Mammalia, Muridae) from the lake of Olkhon (Baikal). *Zool. Zh.* 39 1960 : 1888-1891, 4 figs. [Russian, English summary.]
- Liu, H. I. *see* Chow.
- Liu, H.-Y. Length and breadth relationship in the cheek teeth of *Equus*. *Vertebrata Palasiatica* 1961 : 32-38, 6 figs. [Chinese, English summary.]
- Livingstone, F. B. Comments. [On Howell, F. C. European and northwest African Middle Pleistocene hominids. *Curr. Anthropol.* 1, 1960 : 192-232.] *Curr. Anthropol.* 2 : 117-118.
- Llewellyn, L. M. & Webster, C. G. Raccoon predation on waterfowl. *Trans. N. Amer. Wildl. Conf.* 25, 1960 : 180-185.
- Lloyd, D. P. C. (1). Action potential and secretory potential of sweat glands. *Proc. nat. Acad. Sci. Wash.* 47 : 351-358, 7 figs.
- Lloyd, D. P. C. (2). Temperature and the action of sweat glands. *Proc. nat. Acad. Sci. Wash.* 47 : 358-362, 4 figs.
- Lock, J. A. *see* Buechner.
- Lock, J. A. *see* Harthoorn.
- Locke, L. N. *see* Clark.
- Lockie, J. D. The food of the pine marten *Martes martes* in west Ross-shire, Scotland. *Proc. zool. Soc. Lond.* 136 : 187-195, 1 fig.
- Lockley, R. M. Mammals. *Nature in Wales* 7 : 71.
- Lockley, R. M. *see* Fullager.
- Löfgren, F. (1). On the transport mechanism between the hypothalamus and the anterior pituitary. *Forh. K. fysiogr. Sällsk. Lund.* 30, 1960 : 115-120, 6 figs.
- Löfgren, F. (2). The glial-vascular apparatus in the floor of the infundibular cavity. Further studies on the transport mechanism between the hypothalamus and the anterior pituitary. *Acta Univ. lund. Avd. 2. N.F. 57*, 2 : 1-18, 16 figs.
- Lofis, B. Cyclical changes in the distribution of the testis lipids of a seasonal mammal (*Talpa europaea*). *Quart. J. micr. Sci.* 101, 1960 : 199-205, 2 pls., 1 tab.
- Lojda, Z. & Zawistowski, S. The Golgi zone and enzymes. *Folia. Morph. Warszawa* 11, 1960 : 265-274, 21 figs. [Polish, English summary.]
- Long, C. A. (1). First record of the gray bat in Kansas. *J. Mammal.* 42 : 97-98.
- Long, C. A. (2). Woodchuck in Oklahoma and south-eastern Kansas. *J. Mammal.* 42 : 255-256.
- Long, C. A. (3). *Reithrodontomys montanus griseus* in Missouri. *J. Mammal.* 42 : 417-418.
- Long, C. A. (4). A dental abnormality in *Sorex palustris*. *J. Mammal.* 42 : 527-528, 1 fig.
- Long, C. A. (5). Natural history of the brush mouse (*Peromyscus boylii*) in Kansas with description of a new subspecies. *Univ. Kansas Publ. Mus. nat. Hist.* 14 : 99-110, 1 fig., 2 tabs.
- Long, C. A. & House, H. B. *Bassariscus astutus* in Wyoming. *J. Mammal.* 42 : 274-275.
- Long, C. A. *see* Jones.
- Long, T. A., Cowan, R. L., Wolfe, C. W. & Swift, R. W. Feeding the white-tailed deer fawn. *J. Wildl. Mgmt.* 25 : 94-95.
- Longhurst, W. M. Big-game and rodent relationships to forests and grasslands in North America. *Terro et la Vie* 108 : 305-326.
- Longhurst, W. M. *see* Barnes.
- Løns, O. Reinen på Svalbard. *Meddel. norsk. Polarinst. No.* 83, 1959 : 1-31, 4 figs., 1 tab.
- Løns, O. & Synes, P. White whale fishery at Spitzbergen. *Norsk Hvalfangsttid.* 50 : 287-288, 12 figs.
- Loose, H. *Dicerorhinus hemitoechus* Falc. in the Netherlands. *Proc. ned. Akad. Wet. Amst.* 64B : 41-46, 5 figs.
- Lord, J. C. Some further results of trapping for small mammals at Bookham Common. *Lond. Nat. No.* 40 : 73-80, 4 tabs.
- Lord, R. D. (1). Litter size and latitude in North American mammals. *Amer. midl. Nat.* 64, 1960 : 488-499, 2 figs., 1 tab.
- Lord, R. D. (2). Potential life span of cottontails. *J. Mammal.* 42 : 99.
- Lord, R. D. (3). The lens as an indicator of age in the gray fox. *J. Mammal.* 42 : 109-111, 1 fig., 1 tab.
- Lord, R. D. (4). Magnitudes of reproduction in cottontail rabbits. *J. Wildl. Mgmt.* 24 : 23-33, 3 figs., 4 tabs.
- Lord, R. D. (5). Mortality rates of cottontail rabbits. *J. Wildl. Mgmt.* 25 : 33-40, 5 figs., 4 tabs.

- Lord, R. D. (6). Seasonal changes in roadside activity of cottontails. *J. Wildl. Mgmt.* 25 : 206-209, 4 figs., 1 tab.
- Lord, R. D. (7). A population study of the gray fox. *Amer. midl. Nat.* 66 : 87-109, 3 figs., 4 tabs.
- Lord, R. D. & Casteel, D. A. Importance of food to cottontail winter mortality. *Trans. N. Amer. Wildl. Conf.* 25 1960 : 267-276, 3 figs., 2 tabs.
- Lord, R. D. *see* Ferris.
- Lord, R. D. *see* Mohr.
- Loutel, J. F. Ionizing radiation and the whole animal. *Sci. Amer.* 201, 3, 1959 : 117-134, figs.
- Lovell, M. R. C., Gross, C. G. & Weiskrantz, L. A note on the effects of gymnemic acid on taste perception. *Anim. Behav.* 9 : 31-33, 2 figs.
- Lowe, V. P. W. A discussion on the history, present status and future conservation of red deer (*Cervus elaphus* L.) in Scotland. *Terre et la Vie* 108 : 9-40.
- Lowe, V. P. W. & McDougall, E. I. Serum B-globulin types in red deer and other species and their stability in the presence of bacteria. *Nature, Lond.* 192 : 983-984, 2 tabs.
- Lozan, M. N. Age determination of *Dymyomys nitidula* Pall. and of *Muscardinus avellanarius* L. *Zool. Zh.* 40 : 1740-1743, 2 figs. [Russian, English summary.]
- [Luchnik, N. V.] [Radiation and its effect. IV. Influence of various substances introduced into mice on radiation]. *Trud. Inst. Biol. Akad. Ural Filial* 12, 1960 : 46-75, 5 figs, 15 tabs. [In Russian.]
- Lumley, H. de. La grotte de la Masque (Vaucluse). Station paléolithique avec Rhinocéros de Merck. *Bull. Soc. géol. Fr.* (7), 1, 1960 : 903-915, 7 figs.
- Luna, J. J. R. La fauna guatemalteca. *An. Soc. Geogr. Hist. Guatemala* 32, 1959 : 152-158.
- Lund, H. M.-K. The winter food of *Lepus timidus* in Norway. *Meded. Toeg. Inst. biol. No.* 50, 1960 : 52-57, 1 fig., 2 tabs.
- Lundelius, E. Past Pleistocene faunal succession in Western Australia and its climatic interpretation. *Rep. 21st Internat. Geol. Cong.* 4, 1960 : 142-153, 5 tabs.
- Luppa, H. Makroökologische, mikroökologische und topochemische Untersuchungen an der Schleimhaut des Enddarmes der Bisamratte (*Ondatra zibethica* L.) und einiger münster Nager. *Z. mikr. anat. Forsch.* 67 : 610-631, 12 figs.
- Luse, S. A. The ultrastructure of normal and abnormal oligodendroglia. *Anat. Rec.* 138 1960 : 461-492, 12 pls.
- Luttmann, K. (1). A contribution on the evolutionary and comparative aspects of chemical thermoregulation. *Věst. českosl. zool. Společ.* 24, 1960 : 333-337, 1 fig.
- Luttmann, K. (2). A contribution to the question of the effect of adaptation to cold upon the extent of respiratory metabolism of rats. *Vestn. českosl. zool. Společ.* 24, 1960 : 338-341, 2 figs.
- Lüttig, G. & Thienius, E. Über einen Anthracotheriden aus dem tertiären von Thrazien (Griechenland). *Paläont. Z.* 35 : 179-186, 2 figs., 1 pl. [English summary.]
- Luzardo, H. *see* Praderi.
- Lyman, C. P. Hibernators and their problems. *Mass. Audubon* 46 : 69-73.
- Lyman, C. P. & Blinks, O. C. The effect of temperature on the isolated hearts of closely related hibernators and non-hibernators. *J. cell. comp. Physiol.* 54 1959 : 53-63, 4 figs.
- Lyman, C. P. & O'Brien, R. C. Circulatory changes in the thirteen-lined ground squirrel during the hibernating cycle. *Bull. Mus. comp. Zool. Harv.* 124, 1960 : 353-372, 8 figs.
- Lyne, A. G. The postnatal development of wool follicles, shedding, and skin thickness in inbred Merino and Southdown-Merino crossbred sheep. *Aust. J. biol. Sci.* 14 : 141-156, 10 figs., 3 tabs.
- Lyne, A. G. & Heideman, M. J. The pre-natal development of skin and hair in cattle. *Bos indicus* L. and *B. taurus* L. *Aust. J. biol. Sci.* 13, 1960 : 594-599, 8 figs., 4 tabs.
- Lyne, A. G. *see* Downes.
- Lyne, A. G. *see* Molyneux.
- Lyon, M. F. (1). Zigzag: a genetic defect of the horizontal canals in the mouse. *Genet. Res. Camb.* 1, 1960 : 189-195, 1 fig., 7 tabs.
- Lyon, M. F. (2). Gene action in the X-chromosome of the mouse (*Mus musculus* L.). *Nature, Lond.* 190 : 372-373.
- Lyon, M. F. (3). Linkage relations and some pleiotropic effects of the dreher mutant of the house mouse. *Genet. Res. Camb.* 2 : 92-95, 3 figs.
- Lyon, M. F. *see* Carter.
- Lysenko, N. I. (1). On the finding of *Equus sussenbornensis* Wüsti remains referring to the terrace deposits of the mountainous area in the Crimea. *Bull. Soc. Nat. Moscou Geol.* 35, 2, 1960 : 123-124, 2 figs. [Russian, English summary.]
- Lysenko, N. I. (2). A new occurrence of *Hipparion* in the Pliocene of the Crimea. *Palaeont. Zh.* 1960, 3 : 139-140, 1 fig., 1 tab. [In Russian.]
- Macchi, G. *see* Borri.
- McClure, H. E. Batu Caves, Kuala Lumpur. Nature Conservation in Western Malaysia, 1961. *Malay. Nat. J.* 21st Anniv. Spec. Issue : 73-78, 3 figs., 1 pl.
- McConnell, B. R. & Dalke, P. D. The cassia deer herd of southern Idaho. *J. Wildl. Mgmt.* 24 1960 : 265-271, 4 tabs.
- McCrane, M. European ferrets are fun 48 hours a day. *Anim. Kingd.* 63 1960 : 194-199, 2 figs.
- McCue, J. J. G. How bats hunt with sound. *Nat. geogr. Mag.* 119 : 571-578, 8 figs.
- McCullough, C. Y. & Inglis, J. M. Breeding periods of the Ord kangaroo rat. *J. Mammal.* 42 : 337-344, 1 fig., 3 tabs.
- Macdonald, J. R. (1). An early Pliocene fauna from Mission, South Dakota. *J. Paleont.* 34, 1960 : 961-982, 9 figs., 9 tabs.
- Macdonald, J. R. (2). The lower dentition of *Proterix loomisii* Matthew? *J. Paleont.* 35 : 632-633, 1 fig., 1 tab.
- McDougall, E. I. *see* Lowe.
- McGaughey, C. A. The diseases of elephants. Part 1. *Ceylon nat. J.* 9, 1-2 : 17-21.
- McIntosh, D. L. *see* Griffiths.
- Mack, C. Mammals from south-western Queensland. *Mem. Queensland Mus.* 13 : 213-228, 8 figs., 1 pl.

- McKeever, S.** see Hubbard.
- McKenna, M. C. (1).** Fossil Mammalia from the early Wasatchian Four Mile Fauna, Eocene of northwest Colorado. Bull. Dep. Geol. Univ. Calif. **37**, 1960: 1-130, 64 figs., 10 tabs.
- McKenna, M. C. (2).** The Geolabidinae. A new subfamily of Early Cenozoic erinaceoid insectivores. Pub. Dep. Geol. Univ. Calif. **37**, 1960: 131-164, 6 figs.
- McKenna, M. C. (3).** On the shoulder girdle of the mammalian subclass Allotheria. Amer. Mus. Novit. No. 2066: 1-27, 6 figs.
- Mackensen, J. A.** "Open eyelids" in newborn mice. J. Hered. **51**, 1960: 188-190, 2 figs., 1 tab.
- Mackensen, J. A.** see Stevens.
- Mackerras, M. J. & Smith, R. H.** Breeding the short-nosed marsupial bandicoot, *Isaodon macrourus* (Gould), in captivity. Aust. J. Zool. **8** 1960: 371-382, 2 pls., 3 tabs.
- Mackiewicz, J. S.** see Dodds.
- McKinley, D. (1).** The badger in pioneer Missouri. Bluebird (Audubon Soc. Missouri.) **27**, 1960: 3-7, 2 figs.
- McKinley, D. (2).** The American elk in pioneer Missouri. Missouri Hist. Rev. **54**, 1960: 356-365, 1 fig.
- McLaren, A.** New evidence of unbalanced sex-chromosome constitutions in the mouse. Genet. Res. Camb. **1**, 1960: 253-261, 4 tabs.
- McLaughlin, C. A.** see Van Gelder.
- MacLeod, C. F. & Cameron, A. W.** Distribution records for mammals in west-central Quebec. J. Mammal. **42**: 281-282.
- McManus, W. R.** Mixed saliva from sheep. Nature, Lond. **192**: 1161-1163, 3 tabs.
- MacMillen, R. E.** see Bartholomew.
- McMinn, R. M. H. & Kugler, J. H.** The glands of the bile and pancreatic ducts: autoradiographic and histochemical studies. J. Anat. Lond. **95**: 1-11, 2 pls.
- McNeil, W. L.** The pallid bat discovered near Spokane, Washington. Murrelet **37**, 1956: 34-35.
- Madson, J. & Kozicky, E.** George O. Hendrickson 1891-1961. J. Wildl. Mgmt. **25**: 352.
- Maeda, M.** see Kinoshita.
- Magnier, P.** see Arambourg.
- Mahadevan, V., Negi, S. S. & Agarwala, O. N.** Feeding of bamboo flowers to laboratory rats and mice. Nature, Lond. **192**: 470-471, 2 tabs.
- Mahoney, E.** Toilet of the hedgehog. Proc. zool. Soc. Lond. **137**: 635.
- Maldsiunaitė, S. A. (1).** [Biology of marten in forests of Lithuania.] Trud. Akad. Nauk. Lith. S.S.R. Ser. B. **1**, (17), 1959: 189-201, 3 figs., 2 tabs. [Lithuanian, Russian summary.]
- Maldsiunaitė, S. A. (2).** [Distribution and feeding of otter in Lithuania.] Trud. Akad. Lith. S.S.R. ser. C. **3**, (23), 1960: 181-189, 3 tabs. [Lithuanian, Russian summary.]
- Malez, M. (1).** Ein Beitrag zur Kenntnis der Höhlenbären der Čičarija in Istrien. Geol. Vjesn. **12**, 1959: 95-114, 3 pls. [Slovenian, German summary.]
- Malez, M. (2).** Über ein Nashorn aus den Pliozän-Ablagerungen bei Klanjec (Hrvatsko Zagorje). Geol. Vjesn. **13**, 1960: 175-184, 1 pl. [Slovenian, German summary.]
- Mamayeva, G. B.** Some regularities of the linear growth of the skeleton in silver-black foxes. Zool. Zh. **40**: 1557-1564, 1 fig., 8 tabs. [Russian, English summary.]
- Mambetzhumayev, A. M.** On the ecology of the deer *Cervus elaphus bactrianus* Lydekker. Zool. Zh. **40**: 1725-1731, 1 fig., 2 tabs. [Russian, English summary.]
- Manaro, A. J.** Observations on the behaviour of the spotted skunk in Florida. Quart. J. Fla. Acad. Sci. **24**: 59-63.
- Mandel, P.** see Weill.
- Manly, B. M.** see Barnett.
- Mann, F., G. (1).** Regiones biogeograficas de Chile. Invest. zool. chil. **6**, 1960: 15-49, figs.
- Mann, F., G. (2).** Neurobiologia de *Desmodus rotundus*. Invest. zool. chil. **6** 1960: 79-99, 18 figs. English summary.]
- Manolache, C., Manolache, Fl., Hrisal, C., Gătteneanu, I. & Boguleanu, Gh.** Situation dăunătorilor animali ai plantelor cultivate in anii 1955-1956 si 1956-1957. Mem. Inst. Cercet. agron. N.S. No. 28, 1959: 1-85, 18 figs., 11 tabs.
- Manosevitz, M.** see Lindsey.
- Manville, R. H. (1).** The entepicondylar foramen and *Ochrotomys*. J. Mammal. **42**: 103-104.
- Manville, R. H. (2).** Notes on behaviour of marten. J. Mammal. **42**: 112.
- Manville, R. H. (3).** Angora cottontail from Georgia. J. Mammal. **42**: 255.
- Manville, R. H. & Shanahan, R. P.** *Kogia* stranded in Maryland. J. Mammal. **42**: 269-270.
- Manville, R. H.** see Paradiso.
- Maqsood, M.** Initiation of mammary secretion in virgin rats by stimulation of nipples. Pakist. J. sci. Res. **13**: 93-95, 4 figs., 1 tab.
- Marai, I. F. M.** see Badreldin.
- Marchette, N. J.** Microelectrophoresis of the serum proteins of two species of kangaroo rats. Proc. Utah Acad. Sci. **32**, 1955: 211.
- Marin, S. N. & Rotschild, E. V.** Ecological and epizootological importance of nocturnal activity of *Rhombomys opimus* Licht. Zool. Zh. **40**: 264-268, 3 tabs. [Russian, English summary.]
- Markgren, G. & Markgren, M.** Encounters between fox (*Vulpes vulpes*) and golden eagle (*Aquila chrysaetos*). Fauna och Flora **56**: 28-35, 2 figs. [Swedish, English summary.]
- Markov, G.** Zur Variabilität der Färbung des Eichhörnchens in Bulgarien. Z. Säugetierk. **26**: 59-60, 1 tab.
- Markova, A. J.** The reactions of monkeys to the colour, shape and size of objects. Vopros. antrop. Mosk. No. 6: 44-56, 4 tabs. [In Russian.]
- Marlow, B. J. (1).** The mammals of the Sydney district. Aust. Mus. Mag. **13**, 1960: 246-249, 2 figs.
- Marlow, B. J. (2).** Whale marking. Aust. Mus. Mag. **13**: 309-313, 3 figs.
- Marlow, B. J. (3).** Vampire bats—true and false. Aust. Mus. Mag. **13**: 354-357, 4 figs.
- Marlow, B. J. (4).** Reproductive behaviour of the marsupial mouse, *Antechinus flavipes* (Waterhouse) (Marsupialia) and the development of the pouch young. Aust. J. Zool. **9**: 203-218, 3 figs., 2 pls., 2 tabs.

- Marriott, F. H. C.** *see* Morris.
- Marsden, C. D.** Pigmentation in the nucleus substantiae nigrae of mammals. *J. Anat. Lond.* **95**: 256-261, 1 pl.
- Marsden, C. D.** *see* Barnett.
- Marshall, W. H.** *see* Tester.
- Martin, H.** *see* Green.
- Martin, R. L. (1).** A comprehensive classification of shape-variants of vertebrae. *Turtos News* **38**, 1960: 226-227, 2 figs.
- Martin, R. L. (2).** A history of chiropteran rabies with special reference to occurrence and importance in the United States. *Wildl. Dis. & Abstr.* (on Microcard) No. 3: 75 pp.
- Martin, R. L. (3).** Vole predation on bats in an Indiana cave. *J. Mammal.* **42**: 540-541.
- Martini, E.** Struttura dell'intracardio negli inattivatori. *Atti Accad. Sci. Bologna R.C.* (11), **6**, 1959: 163-165.
- Martinson, R. K., Holten, J. W. & Brakhage, G. K.** Age criteria and population dynamics of the swamp rabbit in Missouri. *J. Wildl. Mgmt.* **25**: 271-281, 5 figs., 4 tabs.
- Martinsson, A.** Ein subfossiles Geweih vom Rothirsch, *Cervus elaphus* Linnaeus, von Mossberga auf Öland. *Bull. geol. Inst. Univ. Uppsala* **40**: 365-373, 3 figs. [English summary.]
- Martirosjan, B. A.** *see* Gambarjan.
- Maskar, U.** Über eine Knorpelanlage im Oesophagus eines Dromedarfetus. *Acta anat.* **44**: 206-209, 4 figs. [English summary.]
- Mason, I. L.** Supplement to a World Dictionary of breeds, types and varieties of Livestock. Suppl. to *Tech. Commun. No. 8*, Commonwealth Bureau of Animal Breeding and Genetics, Edinburgh. Slough (Commonwealth Agricultural Bureaux), 1957, pp. 1-52.
- Mason, R. J.** The earliest tool-makers in South Africa. *S. Afr. J. Sci.* **57**: 13-16.
- Massejeff, R., Camerlynck, P. & Hocquet, P.** Les protéines sériques de *Cricetomys gambianus* Waterhouse. Étude par électrophorèse et immuno-électrophorèse en gel de gélose. *C.R. Soc. Biol. Paris* **154**: 1571-1575, 1 fig.
- Massoia, E.** Notas sobre los cricétidos de la Selva Marginal de Punta Lara (Mammalia, Rodentia). *Publ. Mus. Municipal Cienc. Nat. y Trad. de Mar del Plata* **1**: 115-134, 21 figs., 14 tabs. [English summary.]
- Matsumoto, K.** *see* Kubota.
- Matthews, W. H.** Texas fossils: An amateur collector's handbook. *Guidebook Univ. Tex. Bur. econ. Geol.* **2**, 1960: 1-123, 49 pls. [Mammalia pp. 100-106.]
- Matthey, R. (1).** Cytologie comparée des Cricetinae paléarctiques et américains. Les chromosomes de *Calomyscus bairdardi* Thomas et la position du genre *Calomyscus* dans la systématique des Cricetinae. *Rev. suisse Zool.* **68**: 41-61, 39 figs. [English summary.]
- Matthey, R. (2).** Etudes de cytogénétique chez les Muridae: *Reithrodontomys megalotis* Allen, *Hypogeomys antimena* Grandid. et *Neofiber alleni* True. *Resumé.* *Rev. suisse Zool.* **68**: 263-264.
- Matthey, R. (3).** Etudes de cytogénétique et de taxonomie chez les Muridae (Rodentia) *Reithrodontomys megalotis dychei* Allen, *Hypogeomys antimena* Grand., *Neofiber alleni* True. *Mammalia*, Paris **25**: 145-161, 20 figs.
- Matthey, R. & Meylan, A.** Le polymorphisme chromosomique de *Sorex araneus* L. (Mamm. Insectivora). Étude de deux portées de 5 et 9 petits. *Rev. suisse Zool.* **68**: 223-227, 5 figs.
- Matthey, R. & Zimmermann, K.** La position systématique de *Microtus middendorffi* Poliakov. Taxonomie et Cytologie. *Rev. suisse Zool.* **68**: 63-72, 8 figs. [English summary.]
- Matveyev, B. S.** On the dependence of the development of the vertebrate brain upon the developmental rate of the sense organs and the conditions of existence. *Zool. Zh.* **40**: 1778-1794, 9 figs. [Russian, English summary.]
- Mawby, J. E.** A new American occurrence of *Heterosorex* Gaillard. *J. Paleont.* **34**, 1960: 950-956, 2 figs., 1 tab.
- Mayer, W. V.** Histological changes during the hibernating cycle in the Arctic ground squirrel. *Bull. Mus. comp. Zool. Harv.* **124** 1960: 131-154, 4 figs., 2 pls.
- Mayeux, P.** *see* Roth.
- Maxwell, G.** The lives and times of Mij and Edal. *Nat. Hist. N.Y.* **70**, 3: 50-61, illustr.
- Mead, A. P.** A response of the albino rat to red light. *Anim. Behav.* **9**: 225-226, 1 tab.
- Meads, E. B.** *see* Ditchfield.
- Mech, D. (1).** Exit timber wolf, enter coyote. *Anim. Kingd.* **64**: 89-92, 4 figs.
- Mech, D. (2).** The marten, symbol of wilderness. *Anim. Kingd.* **64**: 133-137, 4 figs.
- Medway, Lord. (1).** The Malay tapir in late Quaternary Borneo. *Sarawak Mus. J.* **9**: 356-360, 1 pl.
- Medway, Lord. (2).** Niah Cave bone III—Hell bone (—1959). *Sarawak Mus. J.* **9**: 361-363, 1 tab.
- Medway, Lord. (3).** Niah Cave bone IV—Shrew (*Crocodyra* sp.). *Sarawak Mus. J.* **9**: 364-367, 1 fig., 2 tabs.
- Medway, Lord.** *see* Harrison.
- Meehan, W. R.** Observations on feeding habits and behaviour of grizzly bears. *Amer. midl. Nat.* **65**: 409-412, 1 tab.
- Meester, J. (1).** Observations on southern African shrews. *Pamphl. S. Afr. biol. Soc.* No. 21, 1960: 27-29.
- Meester, J. (2).** Mammals of the Loskop Dam Nature Reserve. *Fauna & Flora*, Transv. No. 11, 1960: 75-82, 6 figs.
- Meester, J. (3).** Rat kings. *Bull. Transvaal Mus.* No. 6: 7, 1 fig.
- Meijer, W. C. P.** Vitiligo bei Rindern in Asien und Europa. *Z. Säugetierk.* **26**: 28-30, 3 figs.
- Meitner, E. R.** Über die Humerustorsion in der Phylogenese. *Anat. Anz.* **109**: 160-163.
- Melentis, J. K.** Studien über fossile vertebraten Griechenlands. 1. Ein Beitrag zur Kenntnis der Verbreitung von *Elephas* (*Archidiakodon*) *meridionalis archaicus* Deperet und Mayet 1923. *Ann. géol. hellen.* **11**, 1960: 266-284, 3 figs., 1 pl.
- Melhorn, W. N.** The Parrish and Glasford mastodons. *Proc. Ind. Acad. Sci.* **69**, 1960: 189-192, 1 tab.
- Mellerah, H. E. L.** The story of man. London (Hutchinson) 1959, pp. 1-256, text illustr., pls.

- Menaker, M.** The free running period of the bat clock: seasonal variations at low body temperature. *J. cell. comp. Physiol.* 57: 81-86, 3 figs.
- Meneghelli, V.** Protein synthesis in upper mesenteric lymph-nodes of rabbits (*Pancreas asellii*). *Acta anat.* 43, 1960: 231-244, 13 figs.
- Mensalvas, F. S.** Bibliography on animal industry of the Philippines (1901-1941) compiled by J. Yamane . . . Supplement (1941-1953). *Bull. nat. Res. Coun. Philipp.* No. 36, 1953: i-xvii, 1-117.
- Merck, G. W.** A look at wildlife in the Sudan. *Anim. Kingd.* 64: 82-88, 4 figs.
- Mergner, H.** Die Blutversorgung der Lamina terminalis bei einigen Affen. *Z. wiss. Zool.* 165: 140-185, 21 figs.
- Merkova, M. A.** see Zimina.
- Metcalfe, G. T. C.** Rhinoceros in Malaya and their future. *Nature Conservation in Western Malaysia*, 1961. *Malay. Nat. J.* 21st Anniv. Spec. Issue: 183-191, 2 pls., 2 tabs.
- Meyer, M. P. & Morrison, P.** Tissue respiration and hibernation in the thirteen-lined ground squirrel, *Spermophilus tridecemlineatus*. *Bull. Mus. comp. Zool. Harv.* 124, 1960: 405-420, 1 fig., 6 tabs.
- Meylan, A.** Insectivores et rongeurs dans la région de Bretolet (Résumé). *Rev. suisse Zool.* 68: 165-166.
- Meylan, A.** see Matthey.
- Michael, R. P.** Observations upon the sexual behaviour of the domestic cat (*Felis catus* L.) under laboratory conditions. *Behaviour* 18: 1-24, 2 pls.
- Michel, G.** see Schwarze.
- Michels, K. M.** see Weaver.
- Michl, H.** see Kaiser.
- Mickey, A. B.** Record of the spotted bat from Wyoming. *J. Mammal.* 42: 401-402.
- Mikach, E. D.** see Cook.
- Miklaszewska-Mrocakowska, A.** see Kowalaka.
- Millenson, J. R.** see Hurwitz.
- Miller, A. H.** see Stirton.
- Miller, J. R., Wood, A. J. & Gibson, W. C.** Longevity in mice with a genetically determined muscular dystrophy. *Nature*, Lond. 195: 552.
- Miller, R. G., Ritey, R. W. & Edwards, R. Y.** Live-trapping marten in British Columbia. *Murrelet* 36, 1955: 1-8, 1 fig., 3 tabs.
- Miller, W. J.** see Stormont.
- Milstead, W. W.** Observations of the activities of small animals (Reptilia and Mammalia) on a quadrat in southwest Texas. *Amer. midl. Nat.* 65: 127-138, 1 fig.
- Milton, O.** The Shwe U Daung, a rhinoceros sanctuary in Burma. *Nature Conservation in Western Malaysia*, 1961. *Malay. Nat. J.* 21st Anniv. Spec. Issue: 103-106.
- Mintz, B.** Embryological phases of mammalian gametogenesis. *J. cell. comp. Physiol.* 56, Suppl. 1, 1960: 31-47, 2 figs., 2 pls., 1 tab.
- Mirić, D.** Die Fledermäuse (Chiroptera) der Unterirdischen Gänge der Festung Petrovaradin. *Bull. Mus. Hist. nat. Belgrade* 16B, 1960: 163-175, 4 figs., 18 tabs. [Slav, German summary.]
- Mislin, H.** Zur Funktionsanalyse der Lymphgefäß-motorik (*Cavia porcellus* L.). *Rev. suisse Zool.* 68: 228-238, 5 figs., 1 tab.
- Mitchell, B. L. & Uys, J. M. C.** The problem of the lechwe (*Kobus lechwe*) on the Kafus Flats. *Oryx* 6: 171-183.
- Mitchell, E. D.** A new walrus from the Imperial Pliocene of southern California: with notes on odobenid and otariid humeri. *Contr. Sci. Los Angeles No. 44*: 1-28, 13 figs., 1 tab.
- Mitchell, J. L.** Mink movements and populations on a Montana river. *J. Wildl. Mgmt.* 25: 48-54, 2 figs., 4 tabs.
- Mitropoulos, M. K. (1).** Über der ersten Nachweis einer pleistozänen Hyaene in Griechenland. *Prakt. Akad. Athens* 35, 1960: 173-178, 4 figs.
- Mitropoulos, M. K. (2).** Über das vorkommen von *Ursus spelaeus* in Agrapha-Gebirge (Griechenland). *Ann. géol. hellen.* 11, 1960: 150-153, 1 fig., 1 pl.
- Mitropoulos, M. K. (3).** Über den ersten nachweis einer Pleistozänen Hyaene in Griechenland. *Ann. géol. hellen.* 11, 1960: 293-296, 2 pls.
- Moebes, W. K. G.** Seltene Kaninbücher und noch einiges andere. *Börsenbl. deutsch. Buchhandel, Frankfurt* 16, No. 120 1960: 2382-2383.
- Moshes, F. P.** Sonic orientation of bats and other animals. *Symp. zool. Soc. Lond. No. 3*, 1960: 57-66, 2 figs.
- Moffat, D. B. (1).** Pre- and post-natal changes in the left subclavian artery and their possible relationship to coarctation of the aorta. *Acta anat.* 43, 1960: 346-357, 9 figs.
- Moffat, D. B. (2).** The development of the posterior cerebral artery. *J. Anat. Lond.* 95: 485-494, 1 fig., 2 pls.
- Moghe, M. A.** see Gopalakrishna.
- Mohlhenrich, J. S.** Distribution and ecology of the hispid and least cotton rats in New Mexico. *J. Mammal.* 42: 13-24, 3 figs.
- Mohr, C. O. & Lord, R. D.** Relation of ectoparasite populations to rabbit populations in northern Illinois. *J. Wildl. Mgmt.* 24 1960: 290-297, 5 tabs.
- Mohr, E. (1).** Glossarium Europae Mammalium Terrestrium. Wittenberg Lutherstadt (A. Ziemsen Verlag) 1961, pp. 1-72.
- Mohr, E. (2).** Schuppentiere. Die Neue Brehm-Bücherei, Wittenberg Lutherstadt (A. Ziemsen Verlag), pp. 1-99, 70 figs.
- Mohr, E. (3).** Der Zahnschluss im Gebiss der Wild-raubtiere und der Haushunde. *Z. Säugetierk.* 26: 50-56, 7 figs. [English summary.]
- Mohr, E. (4).** Willkürliche Betätigung der Rücken-drüse beim Halsband-Pekari. *Z. Säugetierk.* 26: 57.
- Mohrman, R. K.** see Parmalee.
- Molyneux, G. S. & Lyne, A. G.** Studies on experimental dermal cysts in sheep. *Aust. J. biol. Sci.* 14: 131-140, 4 figs., 1 pl., 1 tab.
- Monard, A.** Contribution à la mammalogie d'Angola et prodrome d'une faune d'Angola. *Arq. Mus. Bocage, Lisboa* 6, 1935: 1-314, 43 figs. [Omitted from earlier Records.]
- Montagna, W., Yasuda, K. & Ellis, R. A. (1).** The skin of primates. III. The skin of the alow loris (*Nycticebus coucang*). *Amer. J. phys. anthrop.* 19: 1-21, 8 pls.

- Montagna, W., Yasuda, K. & Ellis, R. A. (2).** The skin of primates. V. The skin of the black lemur (*Lemur macaco*). Amer. J. phys. anthrop. 19: 115-127, 1 fig., 3 pls.
- Montagna, W.** see Yasuda.
- Montgomery, G. G.** A modification of the nicotine dart capture method. J. Wildl. Mgmt. 25: 101-102.
- Moore, D. M.** see Costin.
- Moore, J. C. (1).** The relationships of the gray squirrel, *Sciurus carolinensis*, to its nearest relatives. Southeast. Ass. Game & Fish Comm. 13th Conf. 1959: 356-363, 1 tab.
- Moore, J. C. (2).** The spread of existing diurnal squirrels across the Bering and Panamanian land bridges. Amer. Mus. Novit. No. 2044: 1-26, 2 tabs.
- Moore, J. C. (3).** Geographic variation in some reproductive characteristics of diurnal squirrels. Bull. Amer. Mus. nat. Hist. 122: 1-32, 9 tabs.
- Moore, J. C. (4).** Sailors' siren. Nat. Hist. N.Y. 70, 1: 54-55, illustr.
- Mordkoff, A. M. & Fuller, J. L.** Variability in activity within inbred and crossbred mice. J. Hered. 50, 159: 6-8, 3 tabs.
- Morest, D. K.** Connexions of the dorsal tegmental nucleus in rat and rabbit. J. Anat. Lond. 95: 229-246, 7 figs., 3 pls.
- Morgane, P. J.** Evidence of a "hunger motivational" system in the lateral hypothalamus of the rat. Nature, Lond. 191: 672-674, 2 figs.
- Mori, M.** Muskulatur des *Pteropus edulis*. Okajimas Folia Anat. Jap. 36, 1960: 253-307, 28 figs.
- Morris, B.** Some observations on the breeding season of the hedgehog and the rearing and handling of the young. Proc. zool. Soc. Lond. 136: 201-206.
- Morris, D. (1).** Primate's aesthetics. Nat. Hist. N.Y. 70, 1: 22-29, illustr.
- Morris, D. (2).** Active life for zoo animals. New Scientist. 10: 773-776, 5 figs.
- Morris, L. R.** Photoperiodicity of seasonal rhythm of wool growth in sheep. Nature, Lond. 190: 102-103, 2 figs.
- Morris, L. R.** see Ryle.
- Morris, O. W.** see Gashwiler.
- Morris, O. W.** see Robinette.
- Morris, R. C.** Arthur Standard Vernay. J. Bomb. nat. Hist. Soc. 58: 249-250.
- Morris, V. B. & Marriott, F. H. C.** The distribution of light in an image formed in the cat's eye. Nature, Lond. 190: 176-177, 1 fig.
- Morrison, J. A.** Ovarian characteristics in elk of known breeding history. J. Wildl. Mgmt. 24, 1960: 297-307, 1 fig., 5 tabs.
- Morrison, P.** Some interrelations between weight and hibernation function. Bull. Mus. comp. Zool. Harv. 124, 1960: 75-91, 7 figs.
- Morrison, P.** see Kehl.
- Morrison, P.** see Meyer.
- Morse, M. A. & Balser, D. S.** Fox calling as a hunting technique. J. Wildl. Mgmt. 25: 148-154, 1 fig., 4 tabs.
- Mortelmans, J.** Quelques considérations sur la pathologie des animaux sauvages. Zoo, Antwerp 27: 21-24, 4 figs.
- Morton, W. R. M.** Observations on the full-term foetal membranes of three members of the Camelidae (*Camelus dromedarius* L., *Camelus bactrianus* L. and *Lama glama* L.). J. Anat. Lond. 95: 200-209, 2 figs., 5 pls.
- Mortreuil-Langlois, M.** Variation du nombre des nucléoles en fonction du diamètre nucléaire dans le parenchyme hépatique chez la souris. Arch. Biol., Paris 71 1960: 473-488, 3 figs., 5 tabs. [English summary.]
- Mörzner Brujns, M. F.** Over vogelbescherming, mangoesten en beren in Italië. Levend. Nat. 64: 61-64, 1 fig.
- Moss, M. L. & Young, R. W.** A functional approach to craniology. Amer. J. phys. anthrop. 18, 1960: 281-292, 8 figs.
- Mossige, J.** see Eker.
- Mottl, S.** Mufloni zver. [A monograph on *Ovis musimon*.] Prague, 1960, pp. 1-180, 60 figs., tabs., maps. [Czechoslovak, German summary.] [N.V.]
- Muir, T. J. & Polder, E.** Notes on hibernating bats in Dubuque County Caves. Proc. Iowa Acad. Sci. 67, 1960: 602-606.
- Mukherjee, D. P., Pal, K. & Bhattacharya, P.** Thyroid and male fertility in farm animals. Proc. nat. Inst. Sci. India 26B, 1960: 255-268, 5 tabs.
- Müller, H. J.** Über strukturelle Ähnlichkeiten der Ohr- und Occipitalregion bei Vogel und Sänger. Zool. Anz. 106: 391-402, 5 figs.
- Munkacsi, F.** Correlation between the age of horses and changes in the fractions of their serum proteins. Acta Biol. Acad. Sci. hung. 11, 1960: 231-239, 3 figs., 3 tabs. [German, English summary.]
- Murdaugh, H. V.** see Schmidt-Nielsen.
- Murie, A.** Some food habits of the marten. J. Mammal. 42: 516-521, 3 tabs.
- Murphy, D. A.** Rearing and breeding white-tailed fawns in captivity. J. Wildl. Mgmt. 24 1960: 439-441.
- Mursaloglu, B.** Ankara çevresindeki körfarelevin biyolojisi ve bularla avas usulleri. Ziraat Fakültesi Yayınları Ankara Univ. 66, 31, 1955: i-iv, 1-114, 30 figs., 40 tabs.
- Mursaloglu, B.** see Jones.
- Musil, R.** Die Fauna des Magdelénien der Hadi Höhle. Cas. moravak. Mus. 46: 51-66, 8 tabs. [Polish, German summary.]
- Musser, G. G.** A new subspecies of flying squirrel (*Glaucomys sabrinus*) from southwestern Utah. Proc. biol. Soc. Wash. 74: 119-125, 1 tab.
- Mustelkaitė, L. V.** [Nervous system of rectum in pig] Trud. Akad. Lith. S.S.R. ser. C.3 (23), 1960: 211-217, 2 figs. [Russian, Lithuanian summary.]
- Myczkowski, K.** Rare variations of the venae cavae craniales in rabbit, dog, cat and calf. Folia morph. Warszawa 11 1960: 31-40, 5 figs. [Polish, English summary.]
- Myers, A. J.** see Kitts.
- Myers, K. & Poole, W. E.** A study of the biology of the wild rabbit, *Oryctolagus cuniculus* (L.), in confined populations. II. The effects of season and population increase on behaviour. C.S.I.R.O. Wildl. Res. 6: 1-41, 6 figs., 10 tabs.

- Mykityowycz, R.** see Dudzinski.
- Nagasaki, F. (1).** Some aspects in the distribution of fur-seals in the North Pacific. Bull. Tokai Fish. Res. Lab. No. 28 1960 : 201-210, 8 tabs.
- Nagasaki, F. (2).** Abundance of pups on the Pribilofs estimated from tag-recoveries. Bull. Tokai Fish. Res. Lab. No. 28 1960 : 211-216, 4 tabs.
- Nagasaki, F.** see Kubota.
- Nagasina, J.** A fossil *Rhinoceros* from Kuzuu, Tochigi Prefecture, Japan. Trans. palaeont. Soc. Japan N.S. 42 : 63-67, 1 fig.
- Nair, P. G. & Benjamin, B. R. (1).** A preliminary report on sweat glands in some Indian cattle. Proc. Indian Sci. Congr. 47, 3, 1960 : 487.
- Nair, P. G. & Benjamin, B. R. (2).** A preliminary report on sweat glands in the Indian water buffalo. Proc. Indian Sci. Congr. 47, 3, 1960 : 488.
- Nakamura, N.** see Tokito.
- Naniev, V. I.** see Burchak-Abramovich.
- Napier, J. R.** Prehensility and opposability in the hands of primates. Symp. zool. soc. Lond. No. 5 : 116-132, 7 figs., 1 pl.
- Narnel-Hofstetter, M.** L'origine de la parthénogénèse. Bull. Soc. vaud. Sci. nat. 67 : 357-368.
- Narkiewicz, O.** The segmentation of the upper cervical ganglion. Folia morph., Warszawa 11, Nr. 2 1960 : 126-130, 3 figs. [Polish, English summary.]
- Naruse, M.** On the position of thoracic organs in *Macacus cyclopsis*. Okajimas Folia Anat. Jap. 37 : 291-315, 1 fig., 9 tabs.
- Nassimovich, A. A.** Some general problems and results of acclimatization of terrestrial animals. Zool. Zh. 40 : 957-970. [Russian, English summary.]
- Nasu, K.** Oceanographic investigation in the Chukchi sea during the summer of 1958. Sci. Rep. Whales Res. Inst. 15, 1960 : 143-157, 11 figs.
- Natushke, G.** Ergebnisse der Fledermausberatung und biologische Beobachtungen an Fledermäusen in der Oberlausitz. Bonn. zool. Beitr. 11 Sonderheft : 77-98, 3 figs., 10 tabs.
- Nečas, J.** Jeleni zvěř. [A monograph on *Cervus elaphus*]. Prague, 1959, pp. 1-196, 80 figs., 18 tabs. [In Czechoslovak.] [N.V.]
- Necrasov, O. & Haimovici, S.** Nouvelle contribution à l'étude de *Equus (Asinus) hydruntinus* Reg. An. Sti. Univ. Iasi (2) Sti. nat. 6, 1960 : 355-376, 12 pls.
- Negi, S. S.** see Mahadevan.
- Negus, N. C., Gould, E. & Chipman, R. K.** Ecology of the rice rat, *Oryzomys palustris* (Harlan), on Breton Island, Gulf of Mexico, with a critique of the social stress theory. Tulane Studies in Zoology 8 : 93-123, 12 figs., 6 tabs.
- Negus, N. C.** see Stewart.
- Nesturkh, M. F.** Types of locomotion peculiar to the monkeys and apes, and to the upright gait of man in connection with anthropogenesis. Sovet. antrop. Moak. 1, 1957 : 159-169, 1 fig. [In Russian.]
- Nesturkh, M. F.** see Alekseyeva.
- Neumann, G.-H.** Die visuelle Lernfähigkeit primitiver Säugetiere. Z. Tierpsychol. 18 : 70-83, 7 figs., 3 tabs. [English summary.]
- Nevo, E.** Observations on Israeli populations of the mole rat *Spalax e. ehrenbergi* Nehring 1898. Mammalia, Paris 25 : 127-144, 7 figs., 2 tabs.
- Nevo, E. & Amir, E.** Biological observations on the forest dormouse *Dryomys nitedula* Pallas, in Israel (Rodentia, Muscardinidae). Bull. res. Counc. Israel 9B : 200-201.
- Newton, G.** see Heimstra.
- Newton, R. F.** Aerial census. Wild Life & Sport 2 (1) : 25-28, 3 figs.
- Nichols, C. T.** see Bullard.
- Niethammer, J.** Über die Säugetiere der Niederen Tauern. Mitt. zool. Mus. Berlin 36 1960 : 407-443, 7 figs., 17 tabs.
- Nieuwenhoven, P. J. van** see Wilde.
- Niggol, K.** Early mortality in fur seals according to sex. J. Wildl. Mgmt. 24 1960 : 428-429, 2 tabs.
- [Nikiforova, K. V.]** [Caenozoic fauna of the central Kazakhstan steppes]. Trav. géol. Inst. USSR 45, 1960 : 1-255, 63 figs., 3 tabs. [In Russian.]
- Nikitina, N. A. (1).** Some specific ecological features of the small *Citellus* dwelling at the southern boundary of the Aral. Mater. Poznan. Faun. Flor. SSSR, N.S. (Zool.) No. 38, 1960 : 5-26, 2 figs., 13 tabs. [Russian, English summary.]
- Nikitina, N. A. (2).** The result of marking in the small mammals in Komi Autonomous Republic. Byull. Mosk. Obsch. Isp. Otd. Biol. 66 (2) : 15-25, 5 figs., 8 tabs. [Russian, English summary.]
- Nikolaev, A. M.** About the distribution, density population and biology of *Enhydra lutris*. Trud. Sovesh. Ichtol. Kom. No. 12 : 214-217. [In Russian.]
- Nikol'skaya, I. S.** see Korzhuev.
- Nilsson, A.** Djurlivet i nagra områden väster om Sjaunja. Fauna och Flora 56 : 179-216, 9 figs., map.
- Nishimuta, S.** see Tokita.
- Nishiaki, M.** Ryukuan humpback whaling in 1960. Sci. Rep. Whales Res. Inst. 15, 1960 : 1-15, 8 figs., 3 tabs.
- Nishiaki, M., Ohsumi, S. & Kasuya, T.** Age characteristics in the sperm whale mandible. Norsk. Hvalfangsttid. 50 : 499-507, 7 figs., 1 tab.
- Nishiaki, M. & Yang, H.-C.** A curiously tailed dolphin caught in Formosa. Norsk. Hvalfangsttid. 50 : 507-512, 5 figs., 1 tab.
- Nixon, D. A.** see Huggett.
- Noble, G. A.** Stress and parasitism. I. A preliminary investigation of the effects of stress on ground squirrels and their parasites. Exp. Parasit. 11 : 63-67, 5 tabs.
- Noell, W. K.** see Paigen.
- Nordan, H. C.** see Wood.
- Nordmark, J.** Perception of distance in animal echolocation. Nature, Lond. 190 : 363-364.
- Norris, C. E.** The dugong. The distribution of the dugong in Ceylon. Loris 8, 1960 : 296-300, 3 tabs.
- Norris, K. S. [Ed.]** Standardized methods for measuring and recording data on the smaller cetaceans. J. Mammal. 42 : 471-476, 1 fig.
- Norris, K. S. & Prescott, J. H.** Observations on Pacific cetaceans of California and Mexican waters. Univ. Calif. Publ. Zool. 63 : 291-401, 12 figs., 15 pls., 15 tabs.

- Norris, K. S., Prescott, J. H., Asa-Dorian, P. V. & Perkins, P. An experimental demonstration of echo-location behaviour in the porpoises, *Tursiops truncatus* (Montagu). Biol. Bull. Woods Hole 120: 163-176, 4 figs.
- Nouvel, J., Chauvier, G. & Strazielle, L. (1). Rapport sur la mortalité enregistrée à la Ménagerie du Jardin des Plantes pendant l'année 1959. Bull. Mus. Hist. nat. Paris (2), 33: 63-78, 4 tabs.
- Nouvel, J., Chauvier, G. & Strazielle, L. (2). Effectif et natalité enregistrés à la Ménagerie du Jardin des Plantes pendant l'année 1959. Bull. Mus. Hist. nat. Paris (2), 33: 137-151, 2 tabs.
- Novikov, G. A. In memoriam: Boris S. Vinogradov. Trud. zool. Inst. Akad. Nauk SSSR 29: 7-21, 1 pl. [In Russian.]
- Novosylova, S. L. The development of the chimpanzees experience in using a stick. Vopros. antrop. Mosk. No. 2, 1960: 31-37, 2 figs. [In Russian.]
- Novosylova, S. L. see Braynes.
- Nuzzo, F. see Hamerton.
- Oakley, K. Dating the stages of hominoid evolution. Leech, Johannesburg 28, 1958: 112-115 [N.V.]
- Oberrüder, C. see Kühn.
- O'Brien, R. C. see Lyman.
- Oetkiewicz, J. Essai de l'élevage du lièvre logé dans une cage. [Breeding trials of hares in cages.] Meded. Inst. Toeg. biol. No. 50, 1960: 114-121, 3 figs. [English summary.]
- Ochana, N. L. Animal superstitions. Wild Life & Sport 2 (1): 18-19.
- O'Dell, R. see Schmidt-Nielsen.
- Ogan, A. U. see Haslewood.
- Ogawa, Y. see Tokita.
- O'Gorman, F. A. Fur seals breeding in the Falkland Islands Dependencies. Nature Lond. 192: 914-916, 1 fig.
- Ohno, S., Kaplan, W. D. & Kinoshita, R. (1). On the end-to-end association of the X and Y chromosomes of *Mus musculus*. Exper. Cell. Res. 18, 1959: 282-290, 11 figs.
- Ohno, S., Kaplan, W. D. & Kinoshita, R. (2). Do XY- and O-sperm occur in *Mus musculus*. Exper. Cell. Res. 18, 1959: 382-384, 6 figs.
- Ohno, S., Kaplan, W. D. & Kinoshita, R. (3). The basis of nuclear sex difference in somatic cells of the opossum *Didelphis virginiana*. Exper. Cell. Res. 19, 1960: 417-420, 5 figs.
- Ohno, S., Kaplan, W. D. & Kinoshita, R. (4). On isopycnotic behavior of the XX-bivalent in oocytes of *Rattus norvegicus*. Exper. Cell. Res. 19, 1960: 637-639, 4 figs.
- Ohsumi, S. Relative growth of the fin whale, *Balaenoptera physalus* (Linn.). Sci. Rep. Whales Res. Inst. 15, 1960: 17-84, 15 figs., 4 pls., 10 tabs., 3 appendices.
- Ohsumi, S. see Nishiwaki.
- Okazoe, T. & Amemiya, T. (1). On the development of the fine structure of the junction between epidermis and dermis in the back of the mouse. Okajimas Folia Anat. Jap. 36 1960: 223-231, 2 pls.
- Okazoe, T. & Amemiya, T. (2). On the development of the junction between lamina propria mucosae and epithelium of the tongue of the mouse. Okajimas Folia Anat. Jap. 36: 417-427, 3 pls.
- Okazoe, T. see Amemiya.
- Olrog, C. C. Notas mastozoologicas. II. Sobre la colección del Instituto Miguel Lillo. Acta zool. lillo. 17 1959 [1960]: 403-419. [Spanish, English summary.]
- Olsen, S. J. (1). A new beak-jawed mastodont from Florida. J. Paleont. Soc. India 2, 1957: 131-135, 3 figs. [Recorded N.V. in 1959 Record.]
- Olsen, S. J. (2). Fossil mammals of Florida. Sp. Pub. Fla. Geol. Surv. 6, 1959: 1-75, 13 figs., 14 pls.
- Olsen, S. J. (3). Age and faunal relationship of *Tapiravus* remains from Florida. J. Paleont. 34, 1960: 164-167, 2 figs.
- Olson, S. T. see Klein.
- Olsson, B. see Augustinsson.
- O'Meara, D. C., Payne, D. D. & Witter, J. F. *Sarcoptes* infestation of a fisher. J. Wildl. Mgmt. 24 1960: 339.
- Ondrias, J. C. (1). Secondary sexual variation and body skeletal proportions in European Mustelidae. Ark. Zool. (2), 12, 1960: 577-583, 1 fig., 6 tabs.
- Ondrias, J. C. (2). Variation of the greatest skull length in *Peromyscus mexicanus* and *Peromyscus boylii* from El Salvador. Säugetierk. Mitt. 8, 1960: 148-150, 1 tab.
- Ondrias, J. C. (3). Statut taxinomique actuel des rongeurs de Grece. Mammalia, Paris 25: 22-28.
- Ondrias, J. C. (4). Comparative osteological investigations on the front limbs of European Mustelidae. Ark. Zool. 13: 311-320, 4 figs., 4 tabs.
- Opoczyńska-Sembratowa, Z. & Sembrat, K. Phylogenetic resoundings in the cleavage of mammalian eggs. Przegl. zool. 4, 1960: 249-254, 4 figs., 2 pls. [Polish, English summary.]
- Oppenheimer, G. J. Reference sources for marine mammalogy. Spec. sci. Rep. (Fish.) U.S. Fish Wildl. Serv. No. 361, 1960: 1-9.
- Øritsland, T. Flyteling etter klappmyss på fangstfeltet i Danmarkstredet. Fauna, Oslo 13, 1960: 153-162, map. [English summary.]
- Orlov, V. N. Age variability of the skull in *Equus hemionus* Pall. Zool. Zh. 40: 592-601, 2 figs., 2 tabs. [Russian, English summary.]
- Orlova, S. A. see Segal.
- Orr, R. T. An analysis of the recent land mammals. [of Baja California]. Syst. Zool. 9, 1960: 171-179.
- Osadchaja, N. P. see Tchelissoff-Bebutov.
- Osborn, D. J. Two new distributional records from Thrace. J. Mammal. 42: 105-106, 1 fig., 2 tabs.
- Ōshima, M. Comparative studies on vocalization of monkeys and human beings by observing the process of vocal development of infants. J. Primatology 1, 1958: 161. [Summary] [In Japanese.]
- Ostroumov, A. G. The use of aerial observations for the numerical estimation and the distribution of some fauna representatives in Kamchatka. Byull. Mosk. Obsch. Isp. Prir. Otd. Biol. 66, 3: 25-31, 1 tab. [Russian, English summary.]
- Ostryakov, S. I. see Zubko.

- Ota, K. & Jameson, E. W. Ecological relationships and economic importance of Japanese Microtinae. *Ecology* 41: 184-186.
- Ōtaishi, S. A study on the pelage of the nutria referring to the pelage-change of fur animals in general. *J. Fac. Fish. Hiroshima Univ.* 3, 1960: 1-183, 56 figs., 17 pls., 103 tabs. [Japanese, English summary.]
- Otis, E. M. *see* Charles.
- Ottaway, C. W. Aspects of equine and canine locomotion. *Symp. zool. Soc. Lond.* No. 5: 101-113, 10 figs.
- Owen, R. D. Current status of mammalian immunogenetics. *J. cell. comp. Physiol.* 56, Suppl. 1, 1960: 73-87.
- Synes, P. Tamreinen i Anxarktis. Fauna, Oslo 13, 1960: 148-153, 3 figs.
- Synes, P. *see* Leno.
- Ozaki, H. Notes on a mammoth tusk and reindeer antler from the bottom of the Bering Sea. *Nat. Sci. & Mus. Tokyo* 28: 69-79, 9 figs. [In Japanese.]
- Ozansoy, F. (1). Résultats essentiels de l'étude de la succession faunique de la région d'Ankara (Turquie). *Pub. Min. Res. Inst. Turkey* 56: 50-60.
- Ozansoy, F. (2). Sur quelques Mammifères fossiles (*Dinotherium*, *Serridentinus*, *Dipoides*) du Tertiaire d'Anatolie Occidentale-Turquie. *Pub. Min. Res. Inst. Turkey* 56: 85-93, 2 pls.
- Ozhigova, A. P. Cyto- and myeloarchitectonics of the occipital region of the cerebral cortex in the different ecological groups of monkeys. *Sovet. antrop. Mosk.* 2, 4, 1958: 37-50, 9 figs.
- Osment, J. *see* Stains.
- Pacheco, G. & Dias, V. M. Contribution to the normal fecal flora of the hamster. *Proetus mirabilis* in normal feces of hamster. *Mem. Inst. Oswaldo Cruz* 53, 1955: 41-42.
- Paget, O. E. & Baumgartner-Gamauf, M. Histologische Untersuchungen an einer dominant erblichen Form einer Cataract bei der Hausmaus. *Zool. Anz.* 166: 54-69, 8 figs.
- Paigen, K. & Noell, W. K. Two linked genes showing a similar timing of expression in mice. *Nature, Lond.* 190: 148-150, 1 fig., 2 tabs.
- Pal, K. *see* Mukherjee.
- Palmer, R. F. *see* Carlisle.
- Papanjan, S. B. *see* Gambarjan.
- Paradiso, J. L. & Manville, R. H. Taxonomic notes on the tundra vole (*Microtus oeconomus*) in Alaska. *Proc. biol. Soc. Wash.* 74: 77-92.
- Parmalee, P. W. A recent find of jaguar bones in a Tennessee cave. *J. Tenn. Acad. Sci.* 36: 81-85, 1 fig.
- Parmalee, P. W., Bieri, R. A. & Mohrman, R. K. Mammal remains from an Illinois cave. *J. Mammal.* 42: 119.
- Parovshchikov, V. Ya. (1). Census taking of beavers near the town of Archangelsk. *Zool. Zh.* 40: 466-467, 2 tabs. [Russian, English summary.]
- Parovshchikov, V. Ya. (2). Foods of beavers near Archangelsk. *Zool. Zh.* 40: 623-624. [Russian, English summary.]
- Parovshchikov, V. Ya. (3). On feeding habits of *Myotis myotis borealis*. B. Kuznetz, near Archangelsk. *Zool. Zh.* 40: 1112-1115, 2 tabs. [Russian, English summary.]
- Parpart, A. K. *see* Faust.
- Parrington, F. R. The evolution of the mammalian femur. *Proc. zool. Soc. Lond.* 137: 285-298, 9 figs.
- Parsons, M. A. *see* Abbott.
- Pascual, R. Un nuevo Cardiomyinae (Rodentia, Caviidae) de la formación Arroyo Chasicó (Plioceno Inferior) de la Provincia de Buenos Aires. *Ameghiniana* 2, 4, 61-71, 1 pl. [English summary.]
- Pashkevichus, I. *see* Baitekunas.
- Patric, E. F. & Webb, W. L. An evaluation of three age determination criteria in live beavers. *J. Wildl. Mgmt.* 24 1960: 37-44, 1 fig., 5 tabs.
- Patrick, N. D. Estimating total weights of black bears from carcass weights. *J. Wildl. Mgmt.* 25: 93, 1 fig., 1 tab.
- Patte, E. La dentition des Néanderthaliens. *Ann. Paléont.* 45, 1959: 223-237, 46, 1960: 197-288. [To be continued.]
- Patterson, J. W. Effects of galactosemia. *Anat. Rec.* 138 1960: 395-398, 4 figs.
- Paulov, S. Influence of ionisation radiation on the metabolism of serum proteins in rabbits. *Biol. Prace, Bratislava.* 7 (2): 1-53, 19 figs., 11 tabs. [German, English summary.]
- Paulson, G. R. The mammals of the Cudahy fauna. *Pap. Mich. Acad. Sci.* 46: 127-153, 8 figs.
- Pavlov, A. N. (1). On feeding habits of the fox in spring and summer in Primorsk and Ilmen regions of North-West Caspian territory. *Zool. Zh.* 40: 624-627, 2 tabs. [Russian, English summary.]
- Pavlov, A. N. (2). A new site of the occurrence of *Myospalax psilurus* in East Mongolia. *Zool. Zh.* 40: 784-785, 1 fig. [Russian, English summary.]
- Payne, D. D. *see* O'Meara.
- Payne, H. C. Our National Parks. *Afr. Wild Life* 15: 181-190, 4 figs., and frontis. pl.
- Payne, J. M. & Payne, S. Placental grafts in rats. *J. Embryol. exp. Morph.* 9, 106-116, 2 pls., 1 tab.
- Peacock, R. & Peacock, D. The harvest mouse in northern Virginia. *J. Mammal.* 42: 543-544.
- Pedersen, A. Las pinturas rupestres de las Sierras de Cordoba (Republica Argentina) y sus normas convencionales de representación. *An. Parq. nac. B. Aires* 8, 1959: 51-57.
- Pel, W.-C. (1). Introductory notes on the discovery of human and vertebrate fossils in Tzeyang District, Szechuan Province. *In* Pel, W.-C. & Woo, J.-K. Tzeyang Paleolithic man. *Mem. Inst. Vert. Pal. Acad. Sinica* 1, 1957: 1-12, 2 figs., 4 tabs. [Chinese and English.]
- Pel, W.-C. (2). Description of mammalian fossils. *In* Pel, W.-C. [Ed.] Report on the excavation of Paleolithic sites at Tingtsun, Hsiangfenghsien, Shansi Province, China. *Mem. Inst. Vert. Pal. Acad. Sinica* 2, 1958: 21-74, 30 figs., 5 pls. [Chinese, English summary.]
- Pel, W.-C. (3). Mammalian fossils from Tzeyang District, Szechuan Province. *In* Pel, W.-C. & Woo, J.-K. Tzeyang Paleolithic man. *Mem. Inst. Vert. Pal. Acad. Sinica* 1, 1959: 51-68, 1 pl., 1 tab. [Chinese & English.]
- Pel, W. C. (4). The living environments of the Chinese primitive men. *Paleovertebrata et Paleoanthropologia* 2, (1), 1960: 9-21. [In Chinese.] [N.V.]

- [Pei, W. C.] (5). [New *Gigantopithecus* lower jaw from Kwangsi Province.] Byull. Kom. Izuch. Chetvert. Perioda 24, 1960 : 3-7, 2 figs. [In Russian.]
- Pei, W.-C. (6). Fossil mammals of early Pleistocene age from Yuanmo (Ma-Kai) of Yunnan. Vertebrata Palasiastica 1961 : 16-31, 5 figs., 1 pl.
- Pei, W.-C. & Woo, J.-K. Tzezyang Paleolithic man. Mem. Inst. Vert. Pal. Acad. Sinica. 1, 1957 : 1-71, 2 figs., 5 pls. [Chinese & English.]
- Peng, O. H. Notes on bats from Bali, Lombok and Sumba. Hemera Zoa 67, 1-2, 1960 : 23-32, 2 figs., 5 tabs.
- Pengelly, E. T. & Fisher, K. C. Rhythmical arousal from hibernation in the golden-mantled ground squirrel, *Citellus lateralis tescorum*. Canad. J. Zool. 39 : 105-120, 3 figs., 4 tabs.
- Pequegnat, W. E. Whales, plankton and man. Sci. Amer. 198, 1, 1958 : 84-90, figs.
- Perkins, K. M. see Yocom.
- Parkins, P. see Norris.
- Peterson, R. L. see Foster.
- Petrides, G. A. (1). Can a precious 'living museum' survive present trends? Wild Life, Nairobi 3 (2) : 7-11.
- Petrides, G. A. (2). Wild life preservation and national parks in Ethiopia. Wild Life, Nairobi 3 (3) : 24-26.
- Petrides, G. A. (3). The management of wild hoofed animals in the United States in relation to land use. Terre et la Vie 108 : 181-202, 4 figs., 1 tab.
- Petrov, A. K. Regularities of the individual development of the heart in elks. Zool. Zh. 40 : 447-453, 8 tabs. [Russian, English summary.]
- Petrovsky, Yu. T. 'Ecological peculiarities of *Citellus suslicus* Güld. in Byelorussia. Zool. Zh. 40 : 736-748, 7 figs., 10 tabs. [Russian, English summary.]
- Petrusiewicz, K. Some regularities in male and female numerical dynamic in mice populations. Acta Theriologica 4 1960 : 103-137, 8 figs., 11 tabs.
- Petrusiewicz, K. & Andrychowka, R. Further investigation of the influence of the home cage on the result of fights between male mice. Ekol. polska 8A, 1960 : 325-333, 1 fig., 4 tabs. [Polish, English summary.]
- Petter, F. (1). Eléments d'une révision des lievres européens et asiatiques du sous-genre *Lepus*. Z. Säugetierk. 28 : 30-30, 2 figs. [English summary.]
- Petter, F. (2). Colloque international sur "l'Evolution des mammifères inférieurs et non spécialisés. Mammalia, Paris 25 : 124.
- Petter, F. (3). Repartition géographique et écologie des rongeurs désertiques (du Sahara occidental à l'Iran oriental). Mammalia, Paris 25 (special no.) : 1-222, 93 figs.
- Petzsch, H. (1). "Eisengraues" Farbspiel des Hamsters (*Cricetus cricetus cricetus* Linné 1758). Zool. Anz. 165, 1960 : 418-422.
- Petzsch, H. (2). Zur Frage des "weisen Brustflecks" als eines der Kriterien des Subspezies-Charakters der "West-Hamsters" (*Cricetus cricetus canescens* Nehring, 1897). Z. Säugetierk. 26 : 125-126, 1 fig.
- Peyre, A. Culture in vitro de gonades embryonnaires de Desman (*Galemys pyrenaicus* G.), Mammifère-Insectivore. C.R. Acad. Sci. Paris 252 : 605-607.
- Peyre, A. & Herlant, M. Les modifications cytoologiques de l'antéhypophyse du Desman (*Galemys pyrenaicus* G.). C.R. Acad. Sci. Paris 252 : 463-465.
- Pfeffer, P. L'écologie du sanglier en Asie Centrale d'après les recherches d'A.A. Sloudsky. Terre et la Vie 108 : 368-372, 3 tabs.
- Phillips, D. C. see Edmundson.
- Phillips, G. C. & East, K. The relative efficiency of some small mammal traps. Proc. zool. Soc. Lond. 187 : 637-640, 3 tabs.
- Phillips, R. J. S. "Dappled", a new allele at the mottled locus in the house mouse. Genet. Res. Camb. 2 : 290-295, 9 tabs.
- Phillips, R. J. S. see Carter.
- Picton, H. D. (1). Migration patterns of the Sun River elk herd, Montana. J. Wildl. Mgmt. 25 1960 : 279-290, 3 figs., 6 tabs.
- Picton, H. D. (2). Differential hunter harvest of elk in two Montana herds. J. Wildl. Mgmt. 25 : 415-421, 6 tabs.
- Pigott, Sir B. The New Forest Pony. In Berlin, J. et al. The New Forest. London (Gallery Press) 1960, pp. i-x, 1-201, illustr. [pp. 178-190]
- Pignat, P. Capture peu banale d'une loutre sur le rivage algérois. Bull. Soc. Hist. nat. Afr. nord 51 : 137-138, 1 fig.
- Pilleri, G. (1). Biber. Umachau 60, 1960 : 420-424, 11 figs.
- Pilleri, G. (2). Bewegungstereotypien beim nord-amerikanischen Opossum (*Didelphis marsupialis*, Marsupialia). Rev. suisse Zool. 67, 1960 : 519-521.
- Pilleri, G. (3). Zur Anatomie der *Dolichotis patagona*, Zimmermann 1780 (Rodentia, Caviidae, Dolichotinae). Acta anat. 43, 1960 : 249-263, 12 figs. [English summary.]
- Pilleri, G. (4). Beiträge zur vergleichenden Morphologie des Nagetiergehirns. 7. Die primären Riechzentren des Kanadischen Bibers (*Castor canadensis*, Kuhl)—feinere Anatomie des Bulbus olfactorius und vergleichend-neurohistologische Untersuchungen. pp. 5-35, 17 figs. 8. Das Gehirn (Endocranialausguss) von *Castoroides ohioensis* (Foster [1833]) (Rodentia, Castoridae) und vergleichend-anatomische Beziehungen zum Gehirn des rezenten Kanadischen Bibers. pp. 36-46, 6 figs., 2 tabs. 9. Zur morphologie des Auges des Kanadischen Bibers (*Castor canadensis*, Kuhl). pp. 47-56, 7 figs. 10. Der Bulbus olfactorius accessorius und die sekundären Riechzentren des Kanadischen Bibers (*Castor canadensis*, Kuhl). pp. 57-82, 18 figs. Acta anat. 42, Suppl. [English summaries.]
- Pilleri, G. (5). Über das Gehirn von *Hypogeomys antimena* Granddidier 1869 (Rodentia, Nesomyinae). Rev. suisse Zool. 68 : 425-431, 3 figs. [English summary.]
- Pilleri, G. (6). Das Gehirn der *Macrotrachomys* (Rodentia, Nesomyinae). Rev. suisse Zool. 68 : 433-442, 4 figs. [English summary.]
- Pilton, P. E. Reproduction in the great grey kangaroo. Nature, Lond. 189 : 984-985.
- Pimlott, D. H. The ecology and management of moose in North America. Terre et la Vie 108 : 246-265, 1 fig., 1 pl.
- Pippin, W. F. The distribution and movement of roof rats on Mona Island, West Indies. J. Mammal. 42 : 344-348, 1 fig., 1 tab.
- Pirie, A. Cholesterol in the tapetum lucidum of the eye of the opossum, *Didelphis virginiana*. Nature, Lond. 191 : 708-709, 1 fig., 1 tab.

- Piriot, P. (1). Recensements de grands mammifères dans la plaine de la Luama. Bull. agric. Congo Belge 47 1956 : 341-366, 6 figs.
- Piriot, P. (2). Notes de route sur l'écologie des mammifères entre le Bas-Congo et du Kuri. Bull. agric. Congo Belge 48 1957 : 393-408, 13 figs.
- Piriot, P. (3). Les limites de la distribution de *Hymys* (Thomas) dans l'Est du Congo. Rev. Zool. Bot. afr. 42 1960 : 289-292, 1 fig.
- Pisani, J. F. & Kerr, W. E. Lethal equivalents in domestic animals. Genetics 46 : 773-786, 27 tabs.
- Piveteau, J. (1). A propos de l'homme de Néanderthal. Rev. Quest. sci. pur. appl. 131, 1960 : 153-170.
- Piveteau, J. [Ed.] (2). Traité de Paléontologie. Paris (Masson et Cie). Tome VI, Vol. 1, pp. 1-1138, 970 figs., 1 pl.
- Platzer, W. (1). Über eine dritte Spirallamelle in der Cochlea und zur Anatomie aller drei Spiralblätter unter besonderer Berücksichtigung der Schnecke von *Talpa europaea*. Acta anat. 43 1960 : 62-95, 11 figs. [English summary.]
- Platzer, W. (2). Das Arterien- und Venensystem. (In Hofer and others. Primatologia. Handbook of Primatology. 3 (2), 1960. Blut- und Kreislauforgane. pp. 273-387, 26 figs.)
- Platzer, W. (3). Die Ossicula auditus von *Talpa europaea*. Anat. Anz. 109 : 130-136, 6 figs.
- Plotkin, V. A. Teeth structure in the embryos of Odontoceti. Zool. Zh. 40 : 1901-1902, 4 figs. [Russian, English summary.]
- Podlaskii, G. I. see Krilova.
- Pogorzelski, J. K. The effect of cobalt on the cardiac muscle of the guinea pig. Folia Morph. Warszawa 11 1960 : 287-291, 6 figs. [Polish, English summary.]
- Polder, E. see Muir.
- Polder, E. see Trosky.
- Politis, J. Recherches cytologiques sur la formation du pigment melanique dans les poils des souris. Prakt. Akad. Athens 35, 1960 : 23-27. [Greek, French summary.]
- Polyakov, G. I. (1). Some peculiarities of the structural complication of the neurons of the central nervous system of man, primates and other mammals. Sovet. antrop. Mosk. 2, 3, 1958 : 35-56, 14 figs. [In Russian.]
- Polyakov, G. I. (2). On some peculiarities in the complication of neuron structure of the cerebral cortex in man, apes, monkeys, and other mammals. Sovet. antrop. Mosk. 2, 4, 1958 : 69-85, 13 figs. [In Russian.]
- Poole, W. E. see Myers.
- Popescu, A. Données anatomiques et biologiques concernant l'espèce *Apodemus sylvaticus*. An. Univ. C.I. Parhon, Bucuresci. No. 24, 1960 : 149-168, 21 figs., 1 tab. [Roumanian, French summary.]
- Popescu, C. C. see Almişan.
- Popeskovic, D. see Davidović.
- Popov, L. H. Materials to the general morphology of *Cystophora cristata*, Erkl. of Greenland Sea. Trud. Sovetsk. Ichtiol. Kom. No. 12 : 180-191, 6 figs., 3 tabs. [In Russian.]
- Popovic, V. Endocrines in hibernation. Bull. Mus. comp. Zool. Harv. 124, 1960 : 105-130, 2 figs.
- Porá, E. A., Stoicovici, F. & Roșca, D. I. Les modifications du potassium, du calcium et du phosphore dans le sang des chauves-souris en hibernation et réveil provoqué. Stud. cercet. Biol. Cluj. 11, 1960 : 363-367, 1 tab. [Roumanian, French summary.]
- Porta, J. de (1). Nueva subespecie de toxodóntido del cuaternario de Colombia. Bol. geol. Univ. indust. Santander No. 3, 1959 : 55-61, 2 figs., 3 tabs. [English summary.]
- Porta, J. de (2). Los equidos fósiles de la Sabana de Bogotá. Bol. geol. Univ. indust. Santander No. 4, 1960 : 51-78, 10 figs., 2 pls., 8 tabs. [English summary.]
- Porta, J. de (3). Edentata Xenarthra del pleistoceno de Colombia. Bol. geol. Univ. indust. Santander No. 6, 1961 : 5-32, 9 figs., 4 pls., 6 tabs. [English summary.]
- Poulik, E. see Goodman.
- Pournelle, G. H. (1). The bonobo . . . a sixth genus of ape. Zoonoz 33 (12) 1960 : 3-6, 7 figs.
- Pournelle, G. H. (2). Walrus . . . a delightful Arctic denizen. Zoonoz 34 (9) : 3-7, 7 figs.
- Pournelle, G. H. (3). Notes on reproduction of the koala. J. Mammal. 42 : 396.
- Pournelle, G. H. (4). Observations on captive proboscis monkeys, (*Nasalis larvatus*). Sarawak Mus. J. 9 : 458-460, 1 pl.
- Pourtois, M. Contribution à l'étude des bourgeons dentaires chez la souris. I. Périodes d'induction et de morphodifférenciation. Arch. Biol. Paris 72 : 17-95, 11 figs. 2 pls. [English summary.]
- Poyarkov, D. V. New data on the *Rattus norvegicus* Berk. in natural biotopes of the European part of the U.S.S.R. Zool. Zh. 40 : 1552-1556, 1 fig.
- Praderi, R. & Luzardo, H. Lista de mamíferos colectados en el Arroyo Tres Cruces Grande, Depto de Artigas. Bol. Soc. Taguato 1, 1, 1958 : 26-28.
- Prakash, I. (1). Behaviour of certain mammals towards snakes. Proc. Indian Sci. Congr. 45, 3, 1958 : 380.
- Prakash, I. (2). Food of the desert mammals. Proc. Indian. Sci. Congr. 45, 3, 1958 : 380.
- Prakash, I. (3). Observations on certain insectivores and rodents in captivity. Proc. Indian Sci. Congr. 46, 3, 1959 : 412.
- Prakash, I. (4). Mammalian associations in the desert of Rajasthan. Proc. Indian Sci. Congr. 46, 3, 1959 : 412-413.
- Prakash, I. (5). The time of emergence of the pipistrelle. Proc. Indian Sci. Congr. 47, 3, 1960 : 488.
- Prakash, I. (6). New mammal records and zoogeography of mammals in the Rajasthan Desert. Proc. Indian Sci. Congr. 47, 3, 1960 : 488-489.
- Prakash, I. (7). Die Säugetiere der Rajasthan-Wüste in Indian. Nat. u. Volk 91 : 443-448, 4 figs.
- Prakash, I. see Krishna.
- Prakash, R. & Prasad, J. The cranial peculiarities of Indian hedge-hog, *Erinaceus indicus*. Proc. Indian Sci. Congr. 45, 3, 1958 : 379-380.
- Prakash, R., Prasad, J. & Sulochana, (—). The skull of five striped squirrel, *Funambulus pennanti pennanti* (Wroughton). Proc. Indian Sci. Congr. 45, 3, 1958 : 379.

- Prasad, J. (1).** The cranial peculiarities of didelphys, opossum (*Didelphys crassicaudata*) and bandicoot (*Peragale lagotis*). *Proc. Indian Sci. Congr.* **47**, 3, 1960 : 489.
- Prasad, J. (2).** The skull of an Indian hyaena from Vaisali. *Proc. Indian Sci. Congr.* **47**, 3, 1960 : 489.
- Prasad, J.** see Prakash.
- Prescott, J. H.** see Norris.
- Preuschoff, H.** *Oreopithecus*—Mensch oder Menschaffen? *Umschau* **60**, 1960 : 522-524, 6 figs.
- Priewert, F. W.** Record of an extensive movement by a raccoon. *J. Mammal.* **42** : 113.
- Pringle, V. L.** Game in the Bedford District. *Afr. Wild Life* **15** : 213-216, 3 figs.
- Pruler, O. H.** The Abri Schmidt, an important Upper Palaeolithic site in Bavaria. *Ohio J. Sci.* **61** : 45-59, 9 figs., 1 tab.
- Pruitt, W. O. (1).** A high altitude weasel. *Murrelet* **38**, 1957 : 36.
- Pruitt, W. O. (2).** Behavior of the barren-ground caribou. *Biol. Pap. Univ. Alaska* No. 3, 1960 : 1-43, 7 figs., 6 tabs.
- Pruitt, W. O. (3).** On post-natal mortality in barren-ground caribou. *J. Mammal.* **42** : 550-551, 2 tabs.
- Prusale, Y. A. (1).** [Biology of *Vulpes vulpes crucigera* in Lithuania.] *Trud. Akad. Lith. S.S.R. Ser. B. No. 3*, (23), 1960 : 191-210, 1 fig., 8 tabs. [Lithuanian, Russian summary.]
- Prusaite, Y. A. (2).** [Morphological characteristics and distribution of wolves in Lithuania.] *Trud. Akad. Nauk Lith. SSR. ser. B. No. 1* (24) : 161-176, 7 tabs. [Lithuanian, Russian summary.]
- Prusaite, Y. A. (3).** [Food and reproduction of wolves in Lithuania.] *Trud. Akad. Nauk Lith. SSR. ser. B. No. 1* (24) : 177-191, 5 tabs. [Lithuanian, Russian summary.]
- Psarianos, P.** Neue Rhinocerotidenfunde aus dem Tertiär und Quartär von Mazedonien (Griechenland). *Prakt. Akad. Athens* **33**, 1959 : 303-312, 3 figs.
- Psenner, H.** Das Verhalten der Murmeltiere (*Marmota m. marmota*), insbesondere von Mutter und Jungen, im Bau. *Säugetierk. Mitt.* **8**, 1960 : 144-148, 3 figs.
- Pucek, Z. (1).** Wormian bones (ossicula wormiana) in the skull of some mammals. *Przegl. zool.* **5** : 211-217, 5 figs., 2 tabs. [Polish, English summary.]
- Pucek, Z. (2).** Dentition in the genus *Sorex* Linnaeus. *Przegl. zool.* **5** : 288-289, 1 tab. [In Polish.]
- Pye, J. D. (1).** Perception of distance in animal echolocation. *Nature, Lond.* **190** : 362-363.
- Pye, J. D. (2).** Echolocation by bats. *Endeavour* **20** : 101-111, 11 figs.
- Quay, W. B. (1).** Neural and hypophyseal colloid deposition in the collared lemming. *Science* **131**, 1960 : 42-43, 1 fig.
- Quay, W. B. (2).** The pancreatic islets of desert rodents. *Amer. midl. Nat.* **64**, 1960 : 342-348, 2 figs., 1 tab.
- Quenum, A.** Les types cellulaires pituitaires et leurs localisations chez *Cricetomys gambianus*. *C.R. Soc. Biol. Paris* **155** : 396-398, 1 fig.
- Quenum, A.** see Camain.
- Quilliam, T. A.** see Armstrong.
- Quiring, H.** Primatenentwicklung. *Z. dtch. geol. Ges.* **111**, 1960 : 712-720, 2 tabs.
- Racey, K.** Notes relative to the fluctuation in numbers of *Microtus richardsoni richardsoni* about Alta Lake and Pemberton Valley, B.C. *Murrelet* **41** (1) 1960 : 13-14.
- Raczynski, J.** see Buchalczyk.
- Radev, T.** Inheritance of hypocalasaemia in guinea-pigs. *J. Genet.* **57** : 169-172, 4 tabs.
- Radovich, J.** Relationships of some marine organisms of the northeast Pacific to water temperatures particularly during 1957 through 1959. *Fish Bull. Sacramento* No. 112 : 1-62, 13 figs.
- Radulescu, C. & Samson, P.** Contribution à la connaissance de la dentition lactéale d'*Ursus spelaeus*. *Eiszeit u. Gegenwart* **10**, 1959 : 205-216, 17 figs. [English summary.]
- Rafalovich, I. A.** see Sokolov.
- Rahm, U. (1).** L'*Anomalurus jacksoni* De Winton. (Repartition, biologie et observations en captivité). *Bull. Soc. roy. Zool. Antwerp (Bull. Soc. Zool. Anvers)* No. 18, 1960 : 1-13, 4 pls., map.
- Rahm, U. (2).** Territoriumsmarkierung mit der Voraugendrüse beim Maxwell-Duiker (*Philantomba maxwelli*). *Säugetierk. Mitt.* **8**, 1960 : 140-142, 3 figs.
- Rahm, U. (3).** Beobachtungen an der ersten in Gefangenschaft gehaltenen *Mesopotamogale ruwenzorii* (Mammalia-Insectivora). *Rev. suisse Zool.* **68** : 73-90, 14 figs. [English summary.]
- Rahm, U. (4).** Das Verhalten der Erdferkel (*Tubulidentata*). In *Kukenthal, W. & Krumbach, T.* Handbuch der Zoologie **8** Bd., 10 Teil, 23 Beitr. (27 Lief.) : 1-8, 13 figs.
- Rahm, U. (5).** Esquisses mammalogiques de basse Côte d'Ivoire. *Bull. Inst. franç. Afr. noire* **23A** : 1229-1265, 24 figs.
- Rahm, U. & Verheyen, W. N.** Description d'une nouvelle sous-espèce congolaise de *Deomys ferrugineus*. *Rev. Zool. bot. afr.* **42** 1960 : 343-346.
- Rahm, U.** see Krieg.
- Rahman bin Omar, I. A.** see Lim.
- Ramsay-Fairfax, V. F. D.** The badger. *Rep. Eton Coll. nat. Hist. Soc.* No. 15, 1960 : 13-17, 1 pl.
- Randell, H. P. & Sanghvi, L. D.** "Baro", a new hairless mutant in the mouse-genetics and histology. *Genet. Res. Camb.* **2** : 283-289, 1 pl., 2 tabs.
- Ranney, D. A. & Basmajian, J. V.** Electromyography in the rabbit fetus. *J. exp. Zool.* **144** 1960 : 179-186, 6 figs., 2 tabs.
- Rasmussen, B. A., Stormont, C. & Suzuki, Y.** Blood groups in sheep. III. The A, C, D and M systems. *Genetics* **45**, 1960 : 1595-1603, 8 tabs.
- Rasmussen, B.** Om klapprygsbestandene i detot Nordlige Atlanterhav. [On the stock of hooded seals in the northern Atlantic.] *Fisken og Havet* No. 1, 1960 : 1-23, 9 figs., 1 tab. [In Norwegian.]
- Ratcliffe, F. N.** Flying foxes drinking sea water. *J. Mammal.* **42** : 252-253.
- Ratcliffe, F. N.** see Calaby.
- Raths, P.** Über das Verhalten des Blutzuckers in Winterschlaf und Hypothermie beim Hamster (*Cricetus cricetus* L.). *Z. Biol. München* **112**, 1960 : 282-299, 5 figs. [English summary.]

- Rann, G. G. (1). Terrestrial and aquatic vertebrates of a moist, relict area in Central Texas. *Texas J. Sci.* 11, 1959: 158-171, 3 tabs.
- Rann, G. G. (2). A mass die-off of the Mexican brown bat, *Myotis velifer*, in Texas. *Southwest Nat.* 5, (2), 1960: 104.
- Rann, G. G. (3). Barn owl pellets and small mammal populations near Mathis, Texas, in 1956 and 1959. *Southwest Nat.* 5, (4), 1960: 194-200, 2 tabs.
- Rann, G. G. (4). The big free-tailed bat in southern Texas. *J. Mammal.* 42: 253.
- Rann, G. G. & Wilks, B. J. Noteworthy records of the hog-nosed skunk (*Conepatus*) from Texas. *Texas J. Sci.* 13: 204-205.
- Rausch, R. A. & Ritey, R. W. Narcosis of moose with nicotine. *J. Wildl. Mgmt.* 25: 326-328, 2 tabs.
- Rausch, R. L. Notes on the black bear, *Ursus americanus* Pallas, in Alaska, with particular reference to dentition and growth. *Z. Säugetierk.* 26: 77-107, 12 figs., 7 tabs.
- Ray, C. (1). A question in whale behavior. *Nat. Hist. N.Y.* 70, 6: 46-53, illustr.
- Ray, C. (2). White whales for the aquarium. *Anim. Kingd.* 64: 162-170.
- Ray, C. Background for a baby walrus. *Anim. Kingd.* 65, 1960: 110-114, 6 figs. [wrongly attributed to Ray, C. E. in 1960 Record.]
- Ray, C. E. *see* Waters.
- Ray, C. E. The monk seal in Florida. *J. Mammal.* 42: 113.
- Raynaud, J. Contrôle hormonal de la glande sous-maxillaire de la souris. *Bull. biol.* 94: 1960: 399-523, 18 pls., tabs.
- Reed, C. A. (1). The origin of a familial character: a study in the evolutionary anatomy of moles. *Anat. Rec.* 118, 1954: 343 [Abstr.].
- Reed, C. A. (2). Evolution of a functional anatomical system: burrowing mechanisms in the Talpidae. *Anat. Rec.* 132, 1958: 491-492 [Abstr.].
- Reed, C. A. (3). A review of the archeological evidence on animal domestication in the prehistoric Near East. In Braidwood, R. J. & Howe, B. *Prehistoric Investigations in Iraqi Kurdistan*. Oriental Inst. Univ. Chicago. Studies in ancient Oriental Civilisation, No. 31, 1960: 119-145, 1 fig.
- Reed, C. A. *see* Turnbull.
- Reed, K. M. The Prosclopinae, a new subfamily of talpid insectivores. *Bull. Mus. comp. Zool., Harv.* 125: 473-494, 2 figs., 2 pls.
- Reeder, W. G. (1). A new rodent genus (Family Heteromyidae) from the Tick Canyon formation of California. *Bull. S. Calif. Acad. Sci.* 59, 1960: 121-132, 3 pls., 1 tab.
- Reeder, W. G. (2). Two new rodent genera from the Oligocene White River Formation. *Fieldiana Geol.* 10, 1960: 511-524, 7 figs., 2 tabs.
- Regehr, E. *see* Sows.
- Reiffenstuhl, G. Das Lymphgefäßsystem. (In *Hofer & others Primatologia. Handbook of Primatology*, 3, (2), 1960. Blut- und Kreislauforgane. pp. 388-422, 8 figs.).
- Reig, O. A. (1). Un mustelido del genero *Galictis* del Eocuartario de la Provincia de Buenos Aires. *Ameghiniana* 1, 1-2, 1957: 33-47, 4 figs., 1 fig., 3 pls. [English summary.] [Recorded N.V. 1957.]
- Reig, O. A. (2). Nota previa sobre los Marsupiales de la Formación Chasicó. *Ameghiniana* 1, 3, 1957: 27-31, figs.
- Reinwaldt, E. Über einen weiteren Fall von Fraktur des Baculum beim Fischotter (*Lutra l. lutra* L.) und die Art ihrer Entstehung. *Ark. Zool.* (2) 13 nr 14, 1960: 307-310, 1 fig.
- Remane, A. (1). Zähne und Gebiss. (In *Hofer & others Primatologia. Handbook of Primatology*, 3, (2), 1960: Gebiss. pp. 637-846, 143 figs.).
- Remane, A. (2). Probleme der Systematik der Primaten. *Z. wiss. Zool.* 165: 1-34, 6 figs.
- Rempe, U. Einige Beobachtungen an Bonobos *Pan paniscus* Schwarz 1929. *Z. wiss. Zool.* 165: 81-87, 3 figs.
- Rendel, J. Relationships between blood groups and the fat percentage of the milk in cattle. *Nature, Lond.* 189: 408-409, 1 tab.
- Rendel, J. *see* Gahne.
- Rensch, B. Malversuche mit Affen. *Z. Tierpsychol.* 18: 347-364, 17 figs. [English summary.]
- Renzi, A. Sul polmone del delfino (*Delphinus delphis*). *Arch. zool. (ital.) Napoli* 45, 1960 [1961]: 343-365, 3 pls.
- Reuther, R. T. Breeding notes on mammals in captivity. *J. Mammal.* 42: 427-428.
- Ribaut, J.-P. Un nouveau moyen pour étudier la prédation dans les nichées: L'oeuf postiche. *Rev. suisse Zool.* 68: 238-241, 2 figs.
- Rice, D. W. (1). Sei whales with rudimentary baleen. *Norsk Hvalfangsttid.* 50: 189-193, 1 fig.
- Rice, D. W. (2). Census of the California gray whale, 1959/60. *Norsk Hvalfangsttid.* 50: 219-225, 4 figs.
- Rice, D. W. *see* Kenyon.
- Richard, B. Le castor du Rhône. Statut actuel et mesures de protection. *Terre et la Vie* 1959 Suppl. 55-57.
- Richard, L. R. Comparaison entre les têtes osseuses du lièvre (*Lepus europaeus* Pallas) et du lapin (*Oryctolagus cuniculus* Linné). *Rev. Soc. Sav. Haute Norm.* No. 21: 51-52.
- Richardson, L. & Sandford, K. S. Great Chessells Gravel Pit near Bourton-on-the-water, Glos., and the occurrence of mammalian remains. *Proc. Geol. Ass. Lond.* 71, 1960: 40-46, 1 pl.
- Richter, H. Bestimmen von *Mus*- und *Sylvemus*-Schädelresten aus Eulengewöllen nach dem Stirnbein (Frontale). *Säugetierk. Mitt.* 9: 166-167, 1 fig.
- Ride, W. D. L. The cheek-teeth of *Hypsigymnodon moschatus* Ramsay 1876 (Macropodidae: Marsupialia). *J. roy. Soc. W. Aust.* 44: 53-60, 2 figs., 1 pl., 1 tab.
- Rieck, W. Grundlagen der jaglichen Behandlung des Rehwildes. [Principles of roe deer management.] *Meded. Inst. Toeg. biol.* No. 50, 1960: 178-187, 1 fig., 3 tabs. [English summary.]
- Riedesel, M. L. The internal environment during hibernation. *Bull. Mus. comp. Zool. Harv.* 124, 1960: 421-435, 3 figs., 3 tabs.

- Rife, D. C. & Buranamaras, P. Inheritance of white coat color in the water buffalo of Thailand. *J. Hered.* 50, 1960 : 269-272, 2 figs.
- Riggs, A. Bohr effect in the haemoglobins of marine mammals. *Nature, Lond.* 190 : 94-95, 1 tab.
- Rindani, T. H. *see* Charegaonker.
- Riney, T. A field technique for assessing physical condition of some ungulates. *J. Wildl. Mgmt.* 24, 1960 : 92-94, 1 fig.
- Riney, T. & Austen, B. Poaching control in Wankie National Park. *Wild Life, Nairobi* 3 (2) : 16-21.
- Ringuet, A. B. de. Estudio del genero *Chasicotherium* Cabrera y Kraglievich 1931 (Notoungulata-Homalodotheriidae). *Ameghiniana* 1, 1-2, 1957 : 7-14, 2 pls. [English summary.]
- Rioux, J. A. *see* Golvan.
- Ritcey, R. W. *see* Miller.
- Ritcey, R. W. *see* Rausch.
- Robel, R. J. (1). Determining elk movements through periodic aerial counts. *J. Wildl. Mgmt.* 24 1960 : 103-104.
- Robel, R. J. (2). Detection of elk migration through hunter interviews. *J. Wildl. Mgmt.* 24 1960 : 337-338, 3 tabs.
- Roberts, R. C. (1). The effects on litter size of crossing lines of mice inbred without selection. *Genet. Res. Camb.* 1, 1960 : 239-252, 3 figs., 4 tabs.
- Roberts, R. C. (2). The lifetime growth and reproduction of selected strains of mice. *Heredity* 16 : 369-381, 3 figs., 4 tabs.
- Roberts, R. C. *see* Falconer.
- Robinette, W. L., Gashwiler, J. S. & Morris, O. W. Notes on cougar productivity and life history. *J. Mammal.* 42 : 204-217, 3 figs., 5 tabs.
- Robinette, W. L. *see* Gashwiler.
- Robinette, W. L. *see* Julander.
- Robins, J. P. *see* Stump.
- Robins, M. W. A mutation causing congenital club-foot in the house mouse. *J. Hered.* 50, 1959 : 188-192, 2 figs., 5 tabs.
- Robinson, J. T. (1). Hominid nomenclature. *Man* 59, 1959 : 125.
- Robinson, J. T. (2). The australopithecines and their bearing on the origin of man and of stone tool-making. *S. Afr. J. Sci.* 57 : 3-13, 6 figs.
- Robinson, R. (1). Light undercolor in the Syrian hamster. *J. Hered.* 51, 1960 : 111-115, 1 fig.
- Robinson, R. (2). A review of independent and linked segregation in the Norway rat. *J. Genet.* 57 : 173-192, 2 figs., 5 tabs.
- Robinson, W. B. Population changes of carnivores in some coyote-control areas. *J. Mammal.* 42 : 510-515, 1 tab.
- Robinson, W. L. Test of shelter requirements of penned white-tailed deer. *J. Wildl. Mgmt.* 24, 1960 : 364-371, 2 figs., 1 tab.
- Rodek, H. G. Another spotted bat from New Mexico. *J. Mammal.* 42 : 401.
- Rodriguez, M. O. Los australopithecidos son los más primitivos hacedores de utillaje? Los australopithecidos y el problema del origen del *Homo sapiens*. *An. Univ. Chile* 118, 117, 1960 : 78-92.
- Roe, H. Vorläufige Ergebnisse der Fledermaus-Beringung und Literaturübersicht. *Bonn. zool. Beitr.* 11 Sonderheft : 234-263, 7 figs.
- Roest, A. I. Partially albino badger from California. *J. Mammal.* 42 : 275-276, 1 pl.
- Rogers, T. A. The metabolism of ruminants. *Sci. Amer.* 198, 2, 1958 : 34-38, figs.
- Roginsky, J. J. Several modification regularities and correlations in man and mammals. *Vopros. antrop. Mosk. No. 7* : 9-13. [In Russian.]
- Robe, D. L. Melanistic Norway rats in southern California. *J. Mammal.* 42 : 268.
- Röhrs, M. (1). Allometrie und Systematik. *Z. Säugetierk.* 26 : 130-137, 9 figs.
- Röhrs, M. (2). Allometrieforschung und biologische Formanalyse. *Z. morph. anthrop.* 51 : 289-321, 31 figs., 3 tabs. [English summary.]
- Rois, C. E. Le cycle vaginal du hamster doré. *C.R. Soc. Biol. Paris* 155 : 167-168.
- Roman, L. *see* Strong.
- Romankowowa, A. (1). The sesamoid bones of the autopodia of bats. *Acta Theriologica* 5 : 125-140, 4 figs., 2 tabs.
- Romankowowa, A. (2). The sesamoid bones of the autopodia of Insectivora and Rodentia. *Zool. Polon.* 10 1959-1960 [1961] : 225-226, 7 pls.
- Romer, J. D. Cetaceans recorded from within or near Hong Kong Territorial Waters. *Hong Kong Univ. Fish. J. No. 2*, 1958 : 127-129, 1 pl.
- Roosen-Runge, E. C. Rudimental "genital canals" of the gonad in rat embryos. *Acta anat.* 44 : 1-11, 12 figs.
- Rosati, P. & Cecio, A. Prime osservazioni sul circolo renale dei roditori. *Monit. zool. Ital.* 68 suppl. 1960 : 500-503, 4 figs.
- Rosca, D. I. *see* Pora.
- Rose, L. Le hérisson—*Erinaceus europaeus* (L.). *Rev. vervet. Hist. nat.* 18 : 37-38.
- Rosen, M. N. & Holden, F. F. Multiple purulent abscess (*Corynebacterium pyogenes*) of deer. *Calif. Fish Game* 47 : 293-300, 1 fig.
- Roskoss, T. & Empel, W. The size of the head and the height of spinous processes in the region of the withes of the European bison, *Bison bonasus* (Linnaeus 1758). *Acta Theriologica* 5 : 63-71, 1 fig., 2 pls., 2 tabs.
- Ross, A. Notes on food habits of bats. *J. Mammal.* 42 : 66-71, 1 tab.
- Ross, G. S. *see* Weitzman.
- Ross, S., Sawin, P. B., Denenberg, V. H. & Zarrow, M. X. Maternal behaviour in the rabbit: yearly and seasonal variation in nest building. *Behaviour* 18 : 154-160, 2 figs., 4 tabs.
- Rotblat, J. *see* Lindop.
- Roth, E. E., Adams, W. V., Sanford, G. E., Greer, B., & Mayeux, P. Leptospirosis in wildlife and domestic animals in the United States. *Trans. N. Amer. Wildl. Conf. No. 26* : 211-219.
- Rothausen, K. Über *Microcet*, einen kleinen Squalodontiden aus dem Oberoligozän. *Neues Jb. Geol. Paläont. Abh.* 112 : 106-118, 1 pl.
- Rothschild, M. Increase of hares at Ashton Wold. *Proc. zool. Soc. Lond.* 137 : 634-635.

- Rotschild, E. V. Peculiarities of the geographical distribution of *Rhombomys opimus* Licht. settlements and of elementary plague in Pri-Aral Karakums. Zool. Zh. 40: 749-762, 3 figs., 2 tabs. [Russian, English summary.]
- Rotschild, E. V. see Marin.
- Roux, M. see Legait.
- Rowe, F. P. Ectoparasites found on harvest-mice. (*Micromys minutus* Hermann). Proc. zool. Soc. Lond; 137: 627.
- Rowe, F. P. see Crowcroft.
- Rowell, T. E. (1). Maternal behaviour in non-maternal golden hamsters (*Mesocricetus auratus*). Anim. Behav. 9: 11-15.
- Rowell, T. E. (2). The family group in golden hamsters: its formation and break-up. Behaviour 17: 81-94, 2 figs.
- Rowland, S. J. see Aschaffenburg.
- Rowlands, I. W. see Fullager.
- Rowley, I. (1). The sense of smell and food-finding in the rabbit. A study of lures for rabbit-poisoning. C.S.I.R.O. Wildl. Res. Melb. 5, 1960: 116-125, 2 figs., 1 pl., 1 tab.
- Rowley, I. (2). The effect of concentration on the ingestion of "1080"-poisoned baits by the rabbit. C.S.I.R.O. Wildl. Res. 5, 1960: 126-133, 4 figs., 1 tab.
- Roy, G. Le baguage d'été de chauves-souris. Sous le Plancher No. 5-6, 1956: 11-16.
- Royo y Gomez, J. El yacimiento de vertebrados pleistocenos de Muaco, Estado Falcon, Venezuela, con industria litica humana. Rep. 21st Internat. Geol. Cong. 4, 1960: 154-157. [English summary.]
- Rozmus, T. Les observations sur la conquête de la proie par le *Sorex araneus* Linnaeus 1758. Acta Theriologica 4: 274-276.
- Rubadeau, D. & Young, F. A. Sexual behavior of *Macaca nemestrina* monkeys. Proc. Mont. Acad. Sci. 20: 77.
- Rudnev, F. F. Dispersal of the otter (*Lutra lutra* L.) in the basin of the river Bystraya Sosna. Zool. Zh. 40: 468. [Russian, English summary.]
- Ruffer, D. G. Effect of flooding on a population of mice. J. Mammal. 42: 494-502, 2 figs., 2 tabs.
- Rühmkorf, E. Was ist über die forstwirtschaftliche Bedeutung der Spitzmäuse bekannt? Waldhygiene 1, 1955: 33-37.
- Rühmkorf, E. & Tenius, K. Beobachtungen an Fledermäusen im Weserbergland und Westharz. Bonn. zool. Beitr. 11 Sonderheft: 215-221.
- Rullán, J. B. Nuevas contribuciones al conocimiento de la Paleontología de Mallorca. Bol. Soc. esp. Hist. nat. Secc. Geol. 59: 89-95, 2 figs.
- Runner, M. N. Linkage of brachypodism. J. Hered. 50, 1959: 81-84, 2 figs., 2 tabs.
- Russell, D. A. A review of the Oligocene insectivore *Micropotodius borealis*. J. Paleont. 34, 1960: 940-949, 2 figs.
- Russell, D. E. L'anatomie crânienne de deux créodontes du Paléocène de France. Bull. Soc. géol. Fr. (7), 2, 1960: 195-199, 2 figs., 1 pl.
- Russell, D. E. see Simons.
- Russell, E. S. & Lawson, F. A. Selection and inbreeding for longevity of a lethal type. J. Hered. 50, 1959: 19-25, 1 fig., 4 tabs.
- Russell, L. B. & Bangham, J. W. Variegated-type position effects in the mouse. Genetics 46: 509-525, 4 figs., 5 tabs.
- Russell, L. B. & Russell, W. L. Genetic analysis of induced deletions and of spontaneous nondisjunction involving chromosome 2 of the mouse. J. cell. comp. Physiol. 56 Suppl. 1, 1960: 169-188, 2 figs., 9 tabs.
- Russell, R. J. & Anderson, S. Small mammals from Silver Bow County, Montana. Murrelet 37, 1956: 2-3.
- Rutte, E. Beobachtungen in der Fundstelle altpleistozäner Säugetiere von Randersacker bei Würzburg. Abh. naturw. Ver. Würzburg No. 2, 1959: 30-36, 2 figs.
- Rutledge, R. F. Leisler's bat, *Nyctalus leisleri* in Co. Kildare. Irish Nat. J. 13: 276.
- Ryel, L. A., Fay, L. D. & van Etten, R. C. Validity of age determination in Michigan deer. Pap. Mich. Acad. Sci. 46: 289-316, 13 figs., 7 tabs.
- Ryle, M. & Morris, L. R. Some quantitative studies on tissues of lambs dwarfed by high temperatures during gestation. Aust. J. exp. Biol. med. Sci. 39: 79-92, 1 fig., 8 tabs.
- Rymar, J. K. Experimental studies on qualitative and quantitative blood composition of the lesser blood circulation in rabbits. Folia morph. Warszawa 11 1960: 147-162, 1 fig., 6 tabs.
- Saban, R. Morphologie particulière du sterno-cleido-mastoïdien chez *Cheirogale*. (Lémurien de Madagascar). Mém. Inst. sci. Madagascar 13A, 1960: 139-178, 4 figs., 3 pls.
- [Sablina, T. B.] [Feeding and ecological and morphological characteristics of the digestive tract of reindeer in Karelia] Trud. Inst. Morf. Zhiv. 32 1960: 215-258, 9 figs, 10 tabs. [In Russian]
- Sacher, G. A. Relation of lifespan to brain weight and body weight in mammals. In Wolstenholme, G. E. W. & O'Connor, M. Ciba Foundation colloquia on ageing, 5, The lifespan of animals. London (J. & A. Churchill, Ltd.), 1959: 115-141, 7 figs.
- Sade, J. see Kelemen.
- Sadhu, D. P. see Chowdhury.
- Sadykov, Zh. Morphology of the mammalian spinal cord. Zool. Zh. 40: 900-904, 1 fig. [Russian, English summary.]
- Sagreiya, K. P. Kanha National Park of Madhya Pradesh. Souvenir Vol., 1st. All-India Congr. Zool. 1959: 6-14.
- Sahlén, B. Vildmink. Svensk. Tidskr. 70: 181-182, 2 illust.
- Sahni, M. R. & Tripathi, C. A new classification of the Indian deinotheres and description of *D. orlovii* sp. nov. Palaeont. indica N.S. 33, 4, 1957: 1-33, 3 pls.
- Saint Girons, M. C. (1). Symposium international sur les méthodes d'étude des mammifères, Brno (Tchécoslovaquie) 26 août-5 septembre, 1960. Mammalia, Paris 25: 122-123.
- Saint Girons, M. C. (2). Le rythme nyctéméral d'activité du campagnol roux *Clethrionomys glareolus* (Schreber) 1780. Mammalia, Paris 25: 342-357, 9 figs. [English summary.]
- Saito, K. see Tokita.

- Salces, F.** Diferencias craneanas en las distintas razas de perros. *Rev. Fac. Cienc. Córdoba Ser. Cienc. nat.* 20, 1958, (1-4) : 1-35, 16 figs., 7 tabs.
- Sales, M.** Statut actuel du cerf de Barbarie. *Terre et la Vie* 1959 Suppl. 64-65.
- Salzer, G. M.** see Zenker.
- Samson, P.** see Rădulescu.
- Sanderson, G. C. (1).** The lens as an indicator of age in the raccoon. *Amer. midl. Nat.* 65 : 481-485, 1 fig., 1 tab.
- Sanderson, G. C. (2).** Techniques for determining age of raccoons. *Biol. Notes, Urbana No.* 45 : 1-16, 8 figs., 5 tabs.
- Sanderson, G. C.** Estimating opossum populations by marking young. *J. Wildl. Mgmt.* 25 : 20-27, 2 figs., 4 tabs.
- Sanderson, G. C. & Thomas, R. M.** Incidence of lead in livers of Illinois raccoons. *J. Wildl. Mgmt.* 25 : 160-168, 1 fig., 5 tabs.
- Sandford, K. S.** Tooth of mammoth from Grimley near Worcester. *Trans. Wore. Nat. Cl.* 11 : 135-136.
- Sandford, K. S.** see Richardson.
- Sanford, G. E.** see Roth.
- Sanghi, L. D.** see Randelia.
- Santapan, A. & Abdulali, H. (1).** Scalp of the abominable snowman. *J. Bomb. nat. Hist. Soc.* 58 : 261-263, 3 figs.
- Santapan, A. & Abdulali, H. (2).** [Eds.] What do large predators in the forest live on. *J. Bomb. nat. Hist. Soc.* 58 : 511-512.
- Santiago Genovés, T.** Primate taxonomy and *Oreopithecus*. *Science* 133 : 760.
- Santonja, J. T. & Crusafont Pairo, M.** Consideraciones sobre la edad del yacimiento de vertebrados de Tarrega. *Notas Inst. geol. Esp.* 61 : 99-108. [English summary.]
- Sapazhkov, S. F.** see Beranshtein.
- Sapozhenkov, Yu. F. (1)** Distribution of *Felis caracal* Schr. in Turkmenia. *Zool. Zh.* 40 : 295-297. [Russian, English summary.]
- Sapozhenkov, Yu. F. (2).** On the distribution and ecology of *Felis margarita* in East Turkmenia. *Zool. Zh.* 40 : 1086-1089, 4 tabs. [Russian, English summary.]
- Sapozhenkov, Yu. F. (3).** On the ecology of *Felis lybica* Forst. in eastern Kara-Kumy. *Zool. Zh.* 40 : 1585-1586, 1 tab. [Russian, English summary.]
- Sarajas, H. S. S.** On the cardiac response in hibernation and induced hypothermia. *Bull. Mus. comp. Zool. Harv.* 124, 1960 : 337-351.
- Sarkar, S. S.** The simian crease. *Z. Morph. Anthrop.* 51 : 212-219, 12 figs.
- Sartorius, O.** see Szederjci.
- Satmoko, R. K. P.** Udjong-Kulon Nature Park, Java. *Nature Conservation in Western Malaysia*, 1961. *Malay. Nat. J.* 21st Anniv. Spec. Issue: 107-124, 1 fig., 2 pls.
- Sauerzopf, F. (1).** Ein Beitrag zur Kenntnis der Höhle von St. Margarethen im Burgenlande. *Burgenland. HeimatBl.* 22, 1960 : 8-14, 2 figs., 1 tab.
- Sauerzopf, F. (2).** Ein neuer Fossilfund aus dem südlichen Burgenlande. *Burgenland. HeimatBl.* 22, 1960 : 38-39, 1 fig.
- Sauerzopf, F. (3).** Das Auftreten von *Chalicotherium* im südlichen Burgenlande. *Burgenland. HeimatBl.* 22, 1960 : 147-149, 1 fig.
- Saunders, D. R.** Some preliminary field work on the Skomer vole and field mouse. *Nature in Wales* 7 : 7-10.
- Saunders, R. L. de C. H. & James, R.** X-ray microscopy of arterio-venous anastomoses. *Acta anat.* 43, 1960 : 249-263, 2 figs.
- Savage, D. E.** A survey of various late Cenozoic vertebrate faunas of the Panhandle of Texas. Part III. Felidae. *Pub. Dep. Geol. Univ. Calif.* 36, 1960 : 317-344, 7 figs., 5 tabs.
- Savidge, J.** The introduction of white rhinoceros into the Murchison Falls National Park, Uganda. *Oryx* 6 : 184-189.
- Sawa, H.** Cubical anatomy of several ducts and vessels by injection method of acrylic resin. X. Arterial distribution of the palate in some mammals. *Okajimas Folia Anat. Jap.* 37 : 49-92, 8 pls.
- Sawaya, P.** see Grinkraut.
- Sawin, P. B.** see Crary.
- Sawin, P. B.** see Ross.
- Schäfers, G.** see Almájan.
- Scatterday, J. E.** see Jennings.
- Schaefer, H.** Der Mensch in Raum und Zeit mit besonderer Berücksichtigung des *Oreopithecus*—Problema. *Veröff. naturh. Mus. Basel No.* 1, 1960 : 1-24, 17 figs.
- Schäfer, M.** Die Veröffentlichungen Ruy d'Andrades. *Säugetierk. Mitt.* 9 : 125-127.
- Schaible, R. & Gowen, J. W.** A new dwarf mouse. *Genetics* 46 : 896. [Abstr.]
- Schaller, G. B.** The orang-utan in Sarawak. *Zoologica, N.Y.* 46 : 73-82, 1 fig., 4 tabs.
- Schäuffelen, O. (1).** Zu "Hapaliden als Fleisch fresser". *Säugetierk. Mitt.* 9 : 129.
- Schäuffelen, O. (2).** Zur Biologie des Igels (*Echinus europaeus*) am Neusiedler See. *Säugetierk. Mitt.* 9 : 164.
- Scheffer, V. B.** A dolphin *Stenella* from Washington State. *Murrelet* 41 1960 : 23, 1 fig.
- [Scherstjukov, N. M.] [Description of the remains of a fossil elephant from Groznens Province.] *Trud. Fiestat.-Istori. Mus. G. Zardabi, Akad. Nauk Azerb. SSR No.* 8, 1954 : 227-261, 10 figs.
- Scheuer, J. L.** see Bowden.
- Schevill, W. E.** see Backus.
- Scheving, L. E. & Pauly, J. F.** Daily mitotic fluctuations in the epidermis of the rat and their relation to variations in spontaneous activity and rectal temperature. *Acta anat.* 43 1960 : 337-345, 1 fig., 1 tab.
- Schindler, U.** Auftreten und Bekämpfung der Rötelmäuse (*Clethrionomys glareolus* Schreber) im Dürrejahr 1959 in Nordwestdeutschland. *Z. angew. Zool.* 47, 1960 : 431-447, 5 figs., 4 tabs. [English summary.]
- Schloeth, R. (1).** Einige Verhaltensweisen im Hirschrudel. *Rev. suisse Zool.* 68 : 241-247.
- Schloeth, R. (2).** Markierung und erste Beobachtungen von Markiertem Rotwild im Schweizerischen Nationalpark und dessen Umgebung. *Ergeb. wiss. Untersuch. schweiz. Nationalparks* 7, 197-227, 19 figs., 3 tabs. [English summary.]

Schloeth, R. & Burckhardt, D. Die Wanderungen des Rotwildes *Cervus elaphus* L. in Gebiet des Schweizerischen Nationalparks. Rev. suisse. Zool. 68: 145-156, 1 fig., 2 tabs.

Schloeth, R. see Burckhardt.

Schmalts, L. J. Occurrence of vertebrate remains in Nebraska till of north-central Missouri. J. Paleont. 34, 1960: 762.

Schmaus, M. Fledermausberingung im Hunsrück. Bonn. Zool. Beitr. 11 Sonderheft: 198-203, 1 fig., 4 tabs.

Schmid, F. C. see Clark.

Schmidt-Nielsen, B., Murdaugh, H. V., O'Dell, R., & Bacsanyi, J. Urea excretion and diving in the seal (*Phoca vitulina* L.). J. cell. comp. Physiol. 53, 1959: 393-411, 5 figs., 3 tabs.

Schmook, A. Der Fuchs. Wie er lebt, jagt, und gejagt wird. München (Ott Verlag Thun) 1960. pp. 1-206, frontis. (col.), 12 pls.

Schnapp, B. & Helwing, S. (1). New methods in the ecological investigations of small mammals. Natura, Bucuresti 12, 1960: 80-82. [In Roumanian.]

Schnapp, B. & Helwing, S. (2). Cunoasterea dinamicii populatiilor de mamifere mici cu ajutorul metodei ingluviilor. (Date preliminare de la Valul lui Traian in anii 1958-1959.) Natura, Bucuresti, Ser. Biol. 13: 43-52, 4 figs., 4 tabs. [Roumanian, English summary.]

Schneider, H. Die Ohrmuskulatur von *Asellia tridens* Geoffr. (Hippodideridae) und *Myotis myotis* Borkh. (Vespertilionidae) (Chiroptera). Zool. Jb. (Anat.) 79: 93-122, 16 figs.

Schneider, N. J. see Jennings.

Schneider, R. see Starck.

Schnetter, W. Beringungsergebnisse an der Langfüßigfledermaus (*Miniopterus schreibersi* Kuhl) im Kaiserstuhl. Bonn. zool. Beitr. 11 Sonderheft: 150-165, 1 fig., 6 tabs.

Schober, W. (1). Zur Cytoarchitektonik und Cytologie der Medulla oblongata der Mausohr-Fledermaus, *Myotis myotis* (Borkhausen). Wiss. Z. K.-Marx Univ. Leipzig: Math.-Nat. R. 9, 1960: 745-771, 50 figs.

Schober, W. (2). Zur Kenntnis mitteldeutscher Fledermäuse. Bonn. zool. Beitr. 11 Sonderheft 105-111, 1 fig., 2 tabs.

Schofield, R. D. (1). Determining hunting season waste of deer by following fox trails. J. Wildl. Mgmt. 24 1960: 342-344.

Schofield, R. D. (2). A thousand miles of fox trails in Michigan's ruffed grouse range. J. Wildl. Mgmt. 24 1960: 432-434, 3 tabs.

Schomber, H. W. & Kock, D. Wild life protection and hunting in Tunisia. Afr. Wild Life 15: 137-150, 6 figs.

Schomber, H. W. see Kock.

Schramm, P. Copulation and gestation in the pocket gopher. J. Mammal. 42: 167-170.

Schuller, L. (1). Lidmissbildung bei Hauskatzen. Säugtiert. Mitt. 8, 1960: 161.

Schuller, L. (2). Kampfspiel zwischen einem Grevyzebra-♂ und einem Wattusirind ♂. Säugtiert. Mitt. 9: 10-12, 6 figs.

Schultz, A. H. Vertebral column and thorax. In Hofer, H., Schultz, A. H. & Starck, D. [Eds.] Primatologie [Bd.] IV, Teil 5 [i-vi], 1-66, 28 figs., 17 tabs.

Schultz, A. H. see Hofer.

Schulz, K. C. A. Ulcerating wound behind the shoulder of the black rhinoceros (*Diceros bicornis*) in the Hluhluwe & Mkuzi Game Reserves of Zululand. Afr. Wild Life 15: 55-59, 3 figs.

Schulz, O. A contribution to the comparison of the anatomy of the masseter M. of some domestic animals and some wild animals. Wiss. Z. Humboldt-Univ. Berlin, Math.-Nat. R. 9, 1959-60: 595-611, 28 figs., 7 tabs. [German, English summary.]

Schumann, H. Die Entstehung der Schockung bei Mäusen mit weisser Blasse. Developmental Biol. 2, 1959: 501-515, 9 figs. [English summary.]

Schwarz, E. The taxonomic position of *Rattus pestifer* Thomas 1921. Ann. Mag. nat. Hist. 13 Ser. 4: 415.

Schwarzacher, H. G. Untersuchungen über die skelettmuskel-sehnenverbindung. III. Die Form der Muskelfaserenden, pp. 144-187, 22 figs., II. Histochemische Lokalisation der Acetylcholinesterase und Untersuchungen über ihre mögliche Funktion an der Muskelfaser-Sehnenverbindung, pp. 318-332, 15 figs., Acta Anat. 43, 1960. [English summaries.]

Schwarze, E., Michel, G. & Apitzsch, R. Die Blutgefäße der Brusthöhle des syr. Goldhamsters (*Mesocricetus auratus* W.). Anat. Anz. 109: 426-435, 2 figs.

Schwarzenbach, F. H. [Ed.]. Capra ibex L. 1961, Nos. 1, 2, 3. [Schweizerische Stiftung fuer Alpine Forschungen, Zurich, Arbeitsgemeinschaft zur Erforschung des Steinwildes.]

Schöber, J. Die Entwicklung der Wisentzucht im Urwald von Bialowieza. Acta Theriologica 5: 57-61, 3 tabs.

Scott, A. A bottle-nosed dolphin, *Tursiops truncatus*, on Co. Antrim shore. Irish Nat. J. 13, 1960: 183-184.

Sealander, J. A. Hematological values in deer mice in relation to botfly infection. J. Mammal. 42: 57-60, 1 tab.

Searle, H. G. Topsy, a new mutant in linkage group VII of the mouse. Genet. Res. Camb. 2: 122-126, 2 tabs.

Searle, A. G. see Deol.

Seeliger, H. Quantitative Untersuchungen an Albinomäusen (Erbreiner Stamm "Agnes-Blumh"). Anat. Anz. 109, 1960: 51-73, 1 fig., 3 tabs.

Segal, A. N. & Orlova, S. A. Appearance of beavers in Karelia. Zool. Zh. 40: 1580-1583, 3 figs. (Russian, English summary.)

Segre, A. G. Geologia. [In Biogeografia delle Isole Pelagie.] R.C. Accad. Naz. XL (4) 11, 1960: 115-162, 10 figs., 17 pls., map.

Seidel, D. R. Homing in the eastern chipmunk. J. Mammal. 42: 256-257.

Selsor, C. J. see Stott.

Sembrat, K. see Opoczyńska-Sembratowa.

Semenov, M. Ya. On the peculiarities of embryo distribution in some species of mouse-like rodents. Zool. Zh. 40: 1743-1745, 2 tabs. [Russian, English summary.]

Semenov, L. P. see Korenberg.

Senior, M. see Tong.

Serwatka, S. see Węgrzyn.

- Setzer, H. W. (1). Two new mammals from Egypt. *J. Egypt. Pub. Hlth. Ass.* **33**, 1960 : 1-5.
- Setzer, H. W. (2). The jirds (Mammalia: Rodentia) of Egypt. *J. Egypt. Pub. Health Assoc.* **36** : 81-91.
- Setzer, H. W. (3). The canids (Mammalia) of Egypt. *J. Egypt. Pub. Health Assoc.* **36** : 113-118.
- Șteflea, V. Contribuție la studiul depozitelor loessoide din Jurul Galatilor. *An. Sti. Univ. Iasi N.S.* (2) **6**, 1960 : 225.
- Shafai, M. M. *see* Badreldin.
- Shanahan, R. P. *see* Manville.
- Sharma, D. R. The tabular bone of certain insectivores and its significance. *Proc. Indian Sci. Congr.* **45**, 3, 1958 : 379.
- Sharma, D. R. & Verma, K. K. Laryngeal skeleton and musculature of *Hemiechinus hemiechinus auritus*. *Proc. Indian Sci. Congr.* **47**, 3, 1960 : 490.
- Sharma, H. L. *see* Gupta.
- Sharman, G. B. (1). The mitotic chromosomes of marsupials and their bearing on taxonomy and phylogeny. *Aust. J. Zool.* **9** : 38-60, 7 figs., 2 tabs.
- Sharman, G. B. (2). The embryonic membranes and placentation in five genera of diprotodont marsupials. *Proc. zool. Soc. Lond.* **137** : 197-220, 4 figs., 4 pls.
- Shea, N. J. *see* King.
- Shebbare, E. O. The hispid hare, *Caprolagus hispidus* (Pearson). *J. Bomb. nat. Hist. Soc.* **58** : 266-267.
- [Shekhanov, M. B.] [Index to Soviet literature on rodents 1954-1956]. *Mater. Poznan. Faun-Acr. SSSR, N.S. (Zool.)* **138** 1960 : 231-279. [In Russian.]
- Shellhammer, H. S. Variation in brain acetylcholinesterase in the wild mice *Mus musculus* and *Reithrodontomys megalotis*. *Physiol. Zool.* **34** : 312-318, 2 figs., 2 tabs.
- Shelton, D. J. Wild life in the Zambesi Valley. *Afr. Wild Life* **15** : 75-78, 2 figs.
- Sheppard, P. M. The wild sheep of St. Kilda. *New Scient.* **11** : 419.
- Sheppe, W. A. (1). Notes on the distribution and habitats of mammals in the Pacific Northwest. *Murrelet* **40**, 1959 : 1-4.
- Sheppe, W. A. (2). Systematic and ecological relations of *Peromyscus oreas* and *P. maniculatus*. *Proc. Amer. phil. Soc.* **105** : 421-446, 9 figs., 1 tab., 1 map.
- Shevchenko, Y. G. Development of phylogenetic new areas of the brain in primates. *Sovet. antrop. Mosk.* **3**, 2, 1959 : 73-92, 10 figs., 1 tab. [In Russian.]
- Shevkunova, E. A. & Zasukhin, D. N. On the sensitivity of some species of wild animals to *Toxoplasma gondii*. *Zool. Zh.* **40** : 1611-1618, 3 tabs. [Russian, English summary.]
- Shield, J. W. & Woolley, P. Age determination by measurement of pouch young of the quokka (*Setonix brachyurus*). *Aust. J. Zool.* **9** : 14-23, 8 figs., 1 tab.
- Shields, P. W. Movement patterns of brush rabbits in north-western California. *J. Wildl. Mgmt.* **24**, 1960 : 381-386, 2 figs., 3 tabs.
- Shilov, M. N. *see* Krilova.
- Shilova, E. S. *see* Krilova.
- Shimai, K. *see* Takahashi.
- Shimizu, M. Studies on the distribution of the magnitude of the variation on the animal bodies. I. On the voles. *Zool. Mag., Tokyo* **70** : 235-241, 2 figs. [Japanese, English summary.]
- Shimizu, Y. & Taguchi, H. A survey of fur seal liver oil and its vitamin A content. *Bull. Tokai Fish. Res. Lab. No. 30* : 117-131, 8 figs., 1 pl., 6 tabs. [Japanese, English summary.]
- Shinagawa, C. Morphological and cytochemical studies on erythrocytes of vertebrates. *J. Sci. Hiroshima Univ. Ser. B. Div. 1 (Zool.)* **19**, 1960 : 57-116, 21 figs., 2 tabs.
- Shirkova, G. I. & Verevkina, G. L. Conditional motor chain reflexes in monkeys. *Dokl. Akad. Nauk. SSSR (Transl.) Biol. Sci.* **133** : 621-624, 2 figs. [Russian original 1960, p. 730.]
- [Shmidt, G. A.] (1). [Ecological and morphogenetic principles in the development of the skeleton muscles]. *Trud. Inst. Morf. Zhiv.* **29** 1960 : 3-13. [In Russian.]
- [Shmidt, G. A.] (2). [The early embryogenesis of the cow]. *Trud. Inst. Morf. Zhiv.* **30** 1960 : 5-100, 21 figs. [In Russian.]
- Shochatovitz, A. *see* Barasa.
- Shore, V. C. *see* Edmundson.
- Short, H. L. (1). Fall breeding activity of a young shrew. *J. Mammal.* **42** : 95.
- Short, H. L. (2). Food habits of a captive least weasel. *J. Mammal.* **42** : 273-274.
- Short, H. L. (3). Age at sexual maturity of Mexican free-tailed bats. *J. Mammal.* **42** : 533-536, 2 tabs.
- Shotwell, J. A. Late Tertiary biogeography of horses in the northern Great Basin. *J. Paleont.* **35** : 203-217, 10 figs.
- Shrader, C. A. *see* Halloran.
- Shreffler, D. C. *see* Cohen.
- Shrivastava, R. K. The deltoid musculature of the Rodentia. *Okajimas Folia Anat. Jap.* **37** : 371-379, 3 figs.
- Shubin, I. G. Contribution to the ecology of *Ellobius talpinus* in Central Kazakhstan. *Zool. Zh.* **40** : 1543-1551, 2 figs., 5 tabs. [Russian, English summary.]
- [Shumkina, O. B.] [Embryonic period of development in Persian lamb]. *Trud. Inst. Morf. Zhiv.* **30** 1960 : 192-245, 18 figs. [In Russian.]
- Shura-Bura, B. L. & Kharlamov, V. P. Autoradiography as a method to reveal labelled rodents and their ectoparasites when studying migration problems. *Zool. Zh.* **40** : 258-263, 2 figs., 5 tabs. [Russian, English summary.]
- Siddiqi, M. S. U. Notes on the status of bats of the genus *Scotophilus* from southern Asia with key to the recognised forms. *Ann. Mag. nat. Hist.* (13) **3**, 1960 (1961) : 449-454, 5 tabs.
- Sidorowicz, J. (1). Problems of the morphology and zoogeography of representatives of the genus *Lemmus* Link 1795 from the Palearctic. *Acta Theriologica.* **4**, 1960 : 53-80, 1 fig., 4 tabs.
- Sidorowicz, J. (2). Influence of the weather on capture of micromammalia I. Rodents (Rodentia). *Acta Theriologica* **4** 1960 : 139-158, 9 tabs.
- Sierfried, P. (1). Der Schädel eines *Parelephas trogontherii* von Gelsenkirchen. *Päliönt. Z.* **30**, 1956 : 171-179, 2 figs., 2 pla.

- Siegrfried, P. (2). Der Fund eines Wisentknochens (*Bison bonasus* L.) in Gladbeck-Westfalen. Neues Jb. Geol. Paläont. Abh. 112: 83-105, 1 fig., 4 pls., 1 tab.
- Sieiro, S. see Frade.
- Signoret, J., Busnel, R. G. & Buisson, M. de. Rôle d'un signal sonore du verat sur le comportement de la truie en oestrus. Bull. Soc. zool. Fr. 85, 1960: 200-201.
- Sigogneau, D. Étude d'un cervidé Pléistocène de Corse. Ann. Paléont. 46, 1960: 47-77, 8 figs., 3 pls., 3 tabs.
- Silas, E. G. Occurrence of the sea cow, *Halicorn dugong* (Erxl.), off the Saurashtra coast. J. Bomb. nat. Hist. Soc. 58: 263-266.
- Silva G., F. see Capurro S.
- Silver, H. Deer milk compared with substitute milk for fawns. J. Wildl. Mgmt. 25: 66-70, 1 fig., 3 tabs.
- Silverstein, E. Effect of hybridization on the primary polydipic trait of an inbred strain of mice. Nature, Lond. 191: 523, 1 tab.
- Simic, V. & Jankovic, Z. Prominentiae osseae transitoriae mandibulares et maxillares equorum. Acta anat. 44: 226-235, 10 figs.
- Simms, H. S., Berg, B. N. & Davies, D. F. Onset of disease and the longevity of rat and man. In Wolstenholme, G. E. W. & O'Connor, M. Ciba Foundation colloquia on ageing, 5, The lifespan of animals. London (J. & A. Churchill, Ltd.), 1959: 72-89, 8 figs.
- Simonetta, A. (1). Spedizione biologica in Somalia dell'Università di Firenze Estate 1959. Risultati zoologici. I° Contributo: parte narrativa. Monit. zool. ital. 65, 1960: 1-6, 1 fig. [English summary.]
- Simonetta, A. M. (2). Osservazioni sul cranio dei Chiroteri e sulle loro affinità sistematiche. Monit. zool. ital. 68, 1960: 45-57, 6 figs. [English summary.]
- Simonetta, A. M. see Funaioli.
- Simons, E. L. (1). Notes on Eocene tarsoids and a revision of some Necrolemurinae. Bull. Brit. Mus. (Nat. Hist.) Geol. 5: 43-69, 3 figs., 3 pls.
- Simons, E. L. (2). An anthropoid mandible from the Oligocene Fayum Beds of Egypt. Amer. Mus. Novit. No. 2051: 1-5, 1 fig., 2 tabs.
- Simons, E. L. & Russell, D. E. Notes on the cranial anatomy of *Necrolemur*. Breviora No. 127, 1960: 1-14, 3 figs.
- Singer, R. The new fossil sites at Langebaanweg (South Africa). Curr. anthrop. 2: 385-387, 1 fig.
- Singer, R. see Hooijer.
- Singleton, W. R. see Castle.
- Sjögren, B. Naturvård i Sovjet. Sveriges Nat. 51, 1960: 174-177, 4 figs.
- Skafte, H. A contribution to the preservation of the Sumatran rhinoceros. Acta Trop. Basel 18, 1961: 168-176, 6 figs.
- St. Croix, O. H. de. The white rhino of Hluhwe. J. Bomb. nat. Hist. Soc. 58: 321-331, 2 pls.
- Skalonge, V. N. The tasks of hunting management to the XXII Congress of the Communist Party of the Soviet Union. Zool. Zh. 40: 1291-1298. [Russian, English summary.]
- Skillen, S. see Carlisle.
- Skoczka, S. On food storage of the mole, *Talpa europaea* Linnaeus 1758. Acta Theriologica 5: 23-43, 2 figs., 2 pls., 4 tabs.
- Skorkowski, E. (1). The Przewalski horse. Przegl. zool. 4, 1960: 287-291, 2 figs., 2 tabs. [Polish, English summary.]
- Skorkowski, E. (2). The tarpans. Przegl. zool. 5: 33-35, 1 fig. [Polish, English summary.]
- Skorkowski, E. (3). Metody statystyczne w zootechnice. Medycyny Weterynaryjnej 17: 105-110, 3 figs., 2 tabs.
- Skvortsov, B. P. Ecological-faunistic survey of rodents in some regions of Central Asia and the North-West of the RSFSR in relation to natural nidity of transmissible diseases. Zool. Zh. 40: 247-433, 2 figs., 3 tabs. [Russian, English summary.]
- Slaughter, B. H. (1). A new species of *Smilodon* from a late Pleistocene alluvial terrace deposit of the Trinity River. J. Paleont. 34, 1960: 486-492, 1 pl., 1 fig., 1 tab.
- Slaughter, B. H. (2). A new coyote in the late Pleistocene of Texas. J. Mammal. 42: 503-509, 3 figs., 1 pl.
- Slipper, E. J. (1). Aus dem Leben der Wale. Verh. naturf. Basel 71, 1960: 140-148, 5 figs.
- Slipper, E. J. (2). The still unexplained mystery of the whales. Norsk Hvalfangsttid. 50: 41-54, 9 figs.
- Slipper, E. J. (3). Locomotion and locomotor organs in whales and dolphins (Cetacea). Symp. zool. Soc. Lond. No. 5: 77-94, 10 figs.
- Slizynski, B. M. Sexual dimorphism in mouse gametogenesis. Genet. Res. Camb. 1, 1960: 477-486, 3 figs., 1 pl., 3 tabs.
- Sloan, R. E. see Sowsls.
- Slosson, J. R. see Hiehle.
- Sluiter, J. W. (1). Sexual maturity in males of the bat *Myotis myotis*. Proc. ned. Akad. Wet. Amst. 64C: 243-249, 1 fig., 2 pls., 2 tabs.
- Sluiter, J. W. (2). Abrasion of teeth in connection with age in the bat *Myotis myotis*. Proc. ned. Akad. Wet. Amst. 64C: 424-434, 3 figs., 3 tabs.
- Sluiter, J. W. & Heerdt, P. F. von. Observations écologiques sur quelques colonies estivales de chauves-souris, des grottes en France. Ann. Spéol. 13, 1958: 111-120, 4 figs., 4 pls., 1 tab.
- Sluiter, J. W. see Heerdt.
- Smart, P. J. G. see Backhouse.
- Smirin, U. M. On the influence of the laboratory maintenance of *Clethrionomys glareolus* Schreb. upon the animals chemical thermoregulation. Byull. Mosk. Obshch. Isp. Priro. Otd. Biol. 66 (3): 20-24, 4 figs. [Russian, English summary.]
- Smit, B. The elusive Okapi. Afr. Wild Life 15: 225-230, 3 figs.
- Smith, D. E. The effects of ionizing radiation in hibernation. Bull. Mus. comp. Zool. Harv. 124, 1960: 493-506, 2 figs., 3 tabs.
- Smith, N. S. see Taber.
- Smith, R. H. see Mackerras.
- Smith, V. R. see Sowsls.
- Snigirevskaya, E. M. Observations on the root-vole on islands of the middle course of the Volga. Trud. zool. Inst. Akad. Nauk. SSSR 29: 137-165, 2 figs. [In Russian.]
- Snyder, D. P. see Dodge.
- Snyder, R. L. & Christian, J. J. Reproductive cycle and litter size of the woodchuck. Ecology 41, 1960: 647-656, 2 figs., 6 tabs.

- Snyder, R. L., Davis, D. E. & Christian, J. J. Seasonal changes in the weights of woodchucks. *J. Mammal.* 42: 297-312, 3 figs., 1 pl., 8 tabs.
- Sokolov, I. I. Fossil antelopes of the genus *Spirocerus* Boule et Teilhard de Chardin. *Trud. zool. Inst. Akad. Nauk SSSR* 29: 156-182, 8 figs., 5 tabs. [In Russian.]
- Sokolov, I. I. & Rafalovich, I. A. On the bison in Moldavia. *Byull. Mosk. Obshch. Isp. Prir. Otd. Biol.* 66 (3): 144-146, 1 fig. [In Russian.]
- Sokolov, V. E. (1). Structure and causes of the rise of dermal excrescences in whales *Eubalaena glacialis sieboldii* Gray. *Zool. Zh.* 40: 1427-1429, 3 figs. [Russian English summary.]
- Sokolov, V. E. (2). Determination of the studies of mature cycle in females of *Lagenorhynchus acutus* Gray by method of vaginal smear. *Trud. Sovesh. Ichtiol. Kom. No. 12*: 68-71, 1 fig. [In Russian.]
- Sokolov, W. The skin structure in Pinnipedia of the U.S.S.R. fauna. *J. Morph.* 107 1960: 285-296, 6 figs., 1 tab.
- Sokolova, Z. A. Eye structure in *Ellobius talpinus* Pallas, 1770. *Zool. Zh.* 40: 269-274, 5 figs., 2 tabs. [Russian, English summary.]
- Soletsky, G. K. Specific composition and numerousness of rodents in Western Ustyurt. *Zool. Zh.* 40: 782-784. [Russian, English summary.]
- Soot-Ryen, T. On a Bryde's whale stranded on Curacao. *Norsk Hvalfangsttid.* 50: 323-332, 2 figs., 3 pls.
- Soukup, J. Materiales para el catalogo de los mamíferos Peruanos. *Biota, Lima* 3 22 1960: ?-88 [N.V.] 3 24 1960: 133-161 3 26: 240-276. [Continued from 3 21 1960: 31-44, listed in 1960 Record.] [To be continued.]
- Sousa, A. T. de. Sur l'identification des deux types de cellules gonadotrophes dans l'hypophyse du chat. *Anat. Anz.* 109: 397-399 1 pl.
- South, F. E. Some metabolic specializations in tissues of hibernating mammals. *Bull. Mus. comp. Zool. Harv.* 124 1960: 475-492 8 figs.
- Sowls, L. K. (1). Gestation period of the collared peccary. *J. Mammal.* 42: 425-426 1 tab.
- Sowls, L. K. (2). Hunter-checking stations for collecting data on the collared peccary (*Pecari tajacu*). *Trans. N. Amer. Wildl. Conf. No. 26*: 496-505 1 fig. 1 tab.
- Sowls, L. K., Smith, V. R., Jenness, R., Sloan, R. E. & Reghr, E. Chemical composition and physical properties of the milk of the collared peccary. *J. Mammal.* 42: 245-251 3 figs. 1 pl. 1 tab.
- Spalding, J. F., Strang, V. G., & Le Sturgeon, W. L. Heritability of radiation damage in mice. *Genetics* 46: 129-133 1 fig. 1 tab.
- [Spasski, P. I.] [Whale remains from the Sarmatian deposits in the neighbourhood of the town of Derbenta.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk Azerb. SSR. No. 8* 1954: 188-226 13 figs. 5 tabs. [In Russian.]
- Spatz, H. & Stephan, H. Adaptive Konvergenz von Schädel und Gehirn bei "Kopfwühlern". *Zool. Anz.* 166: 402-423 8 figs. [English summary.] [Consequent discussion by others, see Starck & others, pp. 423-446.]
- Spearman, R. I. The skin abnormality of 'ichthyosis', a mutant of the house mouse. *J. Embryol. exp. Morph.* 8 1960: 387-395 2 figs. 1 pl. 1 tab.
- Spinage, C. A. An unusual throat display of the African elephant. *J. E. Afr. nat. Hist. Soc.* 23 1960: 243.
- Spirina, V. P. Blood group factors in a lower catarrhine monkey (*Macacus rhesus*). *Vopros. antrop. Mosk. No. 4* 1960: 121-125. [In Russian.]
- Spittel, R. L. A sanctuary for dugongs. *Loris* 8 1960: 304-305.
- Sprague, J. M., Chambers, W. W. & Stellar, E. Attentive, affective and adaptive behavior in the cat. *Science* 133: 165-173 6 figs.
- Sprankel, H. Über Verhaltensweisen und Zucht von *Tupaia glis* (Diard 1820) in Gefangenschaft. *Z. wiss. Zool.* 165: 186-22 16 figs.
- Stach, W. Morphologische Beziehungen zwischen Mastzellen und vegetativer Endformation. *Z. mikr.-anat. Forsch.* 67: 257-280 5 figs.
- Stafford, R. see Handley.
- Stains, H. J., Orment, J. & Lippoldt, A. An electric fence enclosure for small mammals. *J. Mammal.* 42: 391-395 1 fig. 1 pl.
- Stains, H. J. see Cochran.
- Stamp, J. T. The pathology of tuberculosis in farm animals. *Symp. zool. Soc. Lond. No. 4*: 1-10 8 figs.
- Starck, D. Die Milz. 1. Die äussere Form der Primatenmilz. (In Hofer & others. *Primatologia. Handbook of Primatology* 3 (2) 1960. Blut- und Kreislauforgane pp. 61-70 9 figs. 2 tabs.)
- Starck, D. & Schneider, R. Larynx. (In Hofer & others. *Primatologia. Handbook of Primatology* 3 (2) 1960. Respirationsorgane pp. 423-587 75 figs.)
- Starck, D. & others. Bemerkungen über Grabanpassungen bei Säugetieren und über die äussere Form des Gehirns von *Notoryctes typhlops* Stirling 1889 (Marsupialia, Notoryctidae). *Zool. Anz.* 166: 423-446 1 fig. 1 tab.
- Starck, D. see Hofer.
- Stearns, E. I. see Van Deusen.
- Stecher, R. M. Numerical variation in the vertebræ of the Prjevalsky horse. *Mammalia, Paris* 25: 192-194.
- Stein, G. H. W. (1). Zum Haarwechsel der Feldmaus. *Microtus arvalis* (Pallas, 1779) und weiterer Muroidea *Acta Theriologica* 4 1960: 27-44 1 fig. 12 tabs.
- Stein, G. H. W. (2). Beziehungen zwischen Bestandsdichte und Vermehrung bei der Waldspitzmaus, *Sorex araneus*, und weiteren Ratzahnschnecken. *Z. Säugetierk.* 26: 13-28 2 figs. 5 tabs. [English summary.]
- Steinbacher, G. Luchs-Gewichte. *Säugetierk. Mitt.* 9: 129.
- Steinberg, H. Using drugs to study animal behaviour. A review. *Anim. Behav.* 9: 109-110.
- Steiner, H. see Bauer.
- Steklenov, E. P. see Treus.
- Stellar, E. see Sprague.
- Stephan, H. Vergleichend-Anatomische. Untersuchungen an Insektivorengehirnen V. Die quantitative Zusammenfassung der Oberflächen des Allocortex. *Acta anat.* 44: 12-59 8 figs. [English summary.]

- Stephan, H. see Bauchot.
- Stephan, H. see Spatz.
- Stephens, J. J. Stratigraphy and paleontology of a late Pleistocene basin, Harper County, Oklahoma. Bull. geol. Soc. Amer. 71 1960 : 1675-1702 9 figs. 1 pl.
- Stevens, L. C., Mackensen, J. A. & Bernstein, S. E. A mutation causing neonatal jaundice in the house mouse. J. Hered. 50 1959 : 35-39 4 tabs.
- Stevenson, J. H. F. Mink in Britain. Exeter. (Pitt's Bookshop.) 1959 (3rd ed.) pp. 1-144 illustr.
- Stewart, M. M. Biology of the Allegany Indian Reservation and vicinity. Part 3. The amphibians, reptiles and mammals. Bull. N.Y. St. Mus. No. 383 : 63-98 4 tabs.
- Stewart, P. A. & Negus, N. C. Recent record of wolf in Ohio. J. Mammal. 42 : 420-421.
- Stillström, J. see Fichtelius.
- Stirton, R. A. A marine carnivore from the Clallam Miocene formation, Washington. Its correlation with non-marine faunas. Pub. Dep. Geol. Univ. Calif. 36 1960 : 345-368 4 figs. 1 tab.
- Stirton, R. A., Tedford, R. H. & Miller, A. H. Cenozoic stratigraphy and vertebrate paleontology of the Tirari Desert, South Australia. Rec. Aust. Mus. 14 : 19-61 4 figs. 1 tab.
- Stirton, R. A. see Burt.
- Stockstad, D. S. see Craighead.
- Stohl, G. Über die Eigentümlichkeiten des Stoffwechsels der Primaten. Z. wiss. Zool. 15 : 123-132 2 tabs.
- Stoicovici, F. see Pora.
- Stokes, A. W. see Balph.
- Stokes, W. L. & Condie, K. C. Pleistocene bighorn sheep from the Great Basin. J. Paleont. 35 : 598-609 7 figs. 4 tabs.
- Stoll, N. R. [Chairman, Editorial Committee]. International Code of Zoological Nomenclature adopted by the XV International Congress of Zoology. London (International Trust for Zoological Nomenclature) pp. i-xviii 1-176.
- Stormont, C., Miller, W. J. & Suzuki, Y. (1). Blood groups and the taxonomic status of American buffalo and domestic cattle. Evolution 15 : 196-208 4 tabs.
- Stormont, C., Miller, W. J. & Suzuki, Y. (2). The S system of bovine blood groups. Genetics 46 : 541-551 11 tabs.
- Storr, G. M. Microscopic analysis of faeces, a technique for ascertaining the diet of herbivorous mammals. Aust. J. biol. Sci. 14 : 157-164 1 pl. 1 tab.
- Stott, K. & Selsor, C. J. (1). Color variation in Bornean gray gibbons. J. Mammal. 42 : 99.
- Stott, K. & Selsor, C. J. (2). The orang-utan in North Borneo. Oryx 6 : 39-42.
- Stott, K. & Selsor, C. J. (3). Observations of the narcon leaf monkey in North Borneo. Mammalia, Paris 25 : 184-189.
- Strandberg, B. E. see Edmundson.
- Strang, V. G. see Spalding.
- Straus, W. L. Primate taxonomy and *Oreopithecus*. Science 133 : 760-761.
- Straselle, L. see Nouvel.
- Street, P. Mammals in the British Isles. London (Robert Hale, Ltd.) 1961 : pp. 1-185 32 illustr.
- Stretch, R. G. A., Leytham, G. W. H. & Kershaw, W. E. The effect of acute schistosomiasis upon learning in rats under different levels of motivation. Ann. trop. Med. Parasit. 54 1960 : 487-492 3 figs.
- Stretch, S. J. E., Stretch, R. G. A., Leytham, G. W. H. & Kershaw, W. E. Discrimination learning and schistosomiasis in the rat : a low-grade infection of several months' duration. Ann. trop. Med. Parasit. 54 1960 : 483-486 3 figs.
- Strickland, J. H. & Calhoun, M. L. The microscopic anatomy of the external ear of *Felis domesticus*. Amer. J. vet. Res. 21 1960 : 845-850, 9 figs.
- Stroeva, O. G. Experimental analysis of the eye morphogenesis in mammals. J. Embryol. exp. Morph. 8 1960 : 349-368 1 fig. 4 pls. 3 tabs.
- Stroganova, A. S. & Chu Tsing. The systematic position of the relic ground-squirrel (*Citellus relictus* Kaschk.) and some data of its ecology in the Kunlun-Tan mountains (Tian Shan). Trud. zool. Inst. Akad. Nauk SSSR 29 : 81-100 6 figs. [In Russian.]
- Strong, L. C. & Roman, L. Tufted—a non-genetic morphological variant in mice. J. Hered. 50 1960 : 227-229 1 fig.
- Strong, L. H. The first appearance of vessels within the spinal cord of the mammal : their developing patterns as far as partial formation of the dorsal septum. Acta anat. 44 : 80-108 15 figs.
- Struhsaker, T. T. Morphological factors regulating flight in bats. J. Mammal. 42 : 152-159 2 tabs.
- Strumwasser, F. Some physiological principles governing hibernation in *Citellus beecheyi*. Bull. Mus. comp. Zool. Harv. 124 1960 : 285-320 17 figs.
- Stump, C. W., Robins, J. P. & Garde, M. L. The development of the embryo and membranes of the humpback whale, *Megaptera nodosa* (Bonnaterre). Aust. J. mar. freshw. Res. 11 1960 : 365-386 15 pls.
- Stumpf, W. A. see Yocom.
- Sulimski, A. *Hystrix primigenia* (Wagner) in the Pliocene fauna from Weze. Acta palaeont. polon. 5 1960 : 319-336 5 figs. 2 pls. 1 tab.
- Sulochna, (—) see Prakash.
- Sulzmann, R. Zur Morphologie des Ependyms im Zentralkanal des Hundes. Anat. Anz. 109 : 351-357 11 figs.
- Suomalainen, P. Stress and neurosecretion in the hibernating hedgehog. Bull. Mus. comp. Zool. Harv. 124 1960 : 271-283 7 figs. 6 tabs.
- Surdacki, S. Untersuchungen über die Nahrung des periziesels *Citellus suslicus* (Guldensstaedt 1770). Acta Theriologica 4 : 288-291 1 tab.
- Surkov, S. S. History and nowadays tasks of the studying of marine mammals in the North. Trud. Sovesh. Ikhtiol. Kom. No. 12 : 18-22. [In Russian.]
- Susheela, A. K. see George.
- Suzuki, Y. see Stormont.
- Sviridenko, P. A. Comparative evaluation of the attractiveness of tree and shrub seeds for mouse-like rodents. Zool. Zh. 40 : 763-767 1 tab. [Russian, English summary.]
- Svistun, V. I. Investigation of the mammoth fauna in Jaburische, Kirovograd region. Dopov. Akad. Nauk Ukr. R.S.S.R. No. 8 1960 : 1111-1114 2 figs. 2 tabs.

- Swistun, V. I.** see Danilova.
- Svolba, F.** Vom Murmeltier-Fett. *Säugetierk. Mitt.* 9: 151-156 1 fig.
- Sweeney, R. C. H.** A preliminary annotated check list of the mammals of Nyasaland. Blantyre (Nyasaland Society) 1959: pp. 1-71 map.
- Świecimski, J.** Studies on the mole, *Talpa europaea europaea* L. (Insectivora) in the Polish Tatras. *Acta zool. cracov.* 5: 1-43 14 figs. 8 pls.
- Swift, R. W.** see Long.
- Sýkora, I. (1).** Die Möglichkeit das ungefähre Alter der Feldmäuse (*Microtus arvalis* Pall.) nach der Kopflänge zu bestimmen. *Acta Mus. Regin. Hrad.* 1A 1960: 105-111 1 fig. 3 tabs. [Czechoslovak, German summary.]
- Sýkora, I. (2).** Die Entwicklung des Feltes und Jugendhaarwechsel bei den Feldmäusen (*Microtus arvalis* Pall.). *Acta Mus. Regin. Hrad.* 2A: 257-268 3 figs. [Czechoslovak, German summary.]
- Szederej, A. & Sartorius, O.** Die Goldmedaillen-Hirsche Ungarns. Budapest (Terra) 1960: pp. 1-459 text illustr.
- Székessy, V.** Beitrag zur Kenntnis der Biologie der Bismarattie (*Ondatra zibethica* L.). *Zool. Anz.* 166: 91-95 2 figs.
- Szostakiewicz-Sawicka, H.** Skin musculature of thorax in apes. *Folia morph., Warszawa* 11 1960: 1-11 6 figs. 1 tab. [Polish, English summary.]
- Szunyoghy, J. (1).** Bemerkungen zu dem Augsatze von E. Nagy. "Berichtigung zu Szunyoghys: Systematische Revision des ungarländischen Schakals, gleichzeitig eine Bemerkung über das Rohrwolf-Problem". *Säugetierk. Mitt.* 9: 4-6.
- Szunyoghy, J. (2).** Kritische Bemerkungen zur Beschreibung des *Ovis musimon sinestella* Turček 1949. *Säugetierk. Mitt.* 9: 6-8.
- Taber, R. D.** The black-tailed deer: a review of ecology and management. *Terre et la Vie* 108: 221-245 1 fig. 4 tabs.
- Taber, R. D., White, K. L. & Smith, N. S.** The annual cycle of condition in the Rattlesnake, Montana, male deer. *Proc. Montana Acad. Sci.* 19 1960: 72-79 5 tabs.
- Taber, R. D.** see Hoffman.
- Tagawa, M.** see Takagi.
- Taibel, A. M.** Considerazioni sistematico-genetiche sulle famiglie Equidae e Ursidae. *Boll. Zool.* 26 1959: 483-504. [English summary.]
- Takagi, S. & Tagawa, M.** Dry and soft feces of the rabbit and their relation to the anal gland secretion and to the cecal contents. *Zool. Mag., Tokyo* 70: 248-252 4 figs. [Japanese, English summary.]
- Takahashi, O. & Shimai, K. (1).** On the occurrence of the vacuoles in the solar ganglion cells of the rat. *Okajimas Folia Anat. Jap.* 36 1960: 207-213 1 pl.
- Takahashi, O. & Shimai, K. (2).** Study on the ganglion cervicalis uteri of the aged rats. *Okajimas Folia Anat. Jap.* 36: 455-463 1 pl.
- Takai, F.** A subfossil *Cuon* from Ang Thong, Thailand. *Trans. paleont. Soc. Japan N.S.* 41: 13-14 1 fig.
- Takai, F.** see Hanzawa.
- Talbot, L. M. & Lamprey, H. F.** Immobilization of free-ranging east African ungulates with succinylcholine chloride. *J. Wildl. Mgmt.* 25: 303-310 2 tabs.
- Talbot, L. M. & Talbot, M. H.** How much does it weigh. *Wild Life, Nairobi* 3 (1): 47-48 2 figs. 1 tab.
- Talbot, L. M.** see Zaphiro.
- Tamar, H.** Taste reception in the opossum and the bat. *Physiol. zool.* 34: 86-91 2 figs. 3 tabs.
- Tamsitt, J. R. (1).** Mating behaviour of the *Peromyscus truei* species group of white-footed mice. *Amer. midl. Nat.* 65: 501-507 1 tab.
- Tamsitt, J. R. (2).** The chromosomes of the *Peromyscus truei* group of white-footed mice. *Texas J. Sci.* 12: 152-157 1 tab.
- Tamsitt, J. R. (3).** Morphological comparison of P1 and F1 generations of three species of the *Peromyscus truei* species group of mice. *Texas J. Sci.* 13: 206-218 7 figs. 1 tab.
- Tanaka, R.** On the arteries of the foot in *Macacus cyclopis*. *Okajimas Folia Anat. Jap.* 37: 1-17 4 figs. 4 tabs.
- Tansley, K., Copenhaver, R. M. & Gunkel, R. D.** Some aspects of the electroretinographic response of the American red squirrel, *Tamiasciurus hudsonicus loquax*. *J. cell. comp. Physiol.* 57: 11-19 8 figs.
- Tatarinov, K. A.** On the digging activity of *Arvicola terrestris scherman* Shaw on subalpine meadows of the Carpathian Mountains. *Zool. Zh.* 40: 786-789 1 fig. [Russian, English summary.]
- Taworski, T. & Woliński, Z.** Interspecific hybrids in the Plock Zoo. *Przegl. zool.* 4 1960: 322-332 6 figs. 1 tab. [Polish, English summary.]
- Taxi, J.** Sur l'innervation des fibres musculaires lisses de l'intestin de Souris. *C.R. Acad. Sci. Paris* 252: 331-333 4 pls.
- Taylor, A.** see Hamerton.
- Taylor, D.** Notes on a recent collection of a black-footed ferret. *Trans. Kansas Acad. Sci.* 64: 41.
- Taylor, E. J.** see Bentley.
- Taylor, J. M.** Reproductive biology of the Australian bush rat *Rattus assimilis*. *Univ. Calif. Publ. Zool.* 60: 1-66 17 figs. 6 pls. 7 tabs.
- Taylor, W. P.** The white-tailed deer of North America. *Terre et la Vie* 108: 203-220 1 fig.
- Taylor Page, F. J. [Ed.], Bagnall-Oakley, R. P. & Ellis, E. A.** Norfolk mammal report, 1960. *Trans. Norfolk Norw. Nat. Soc.* 19 1960: 250-264 2 pls.
- Tcheltsov-Bebutov, A. M. & Osadchaja, N. P.** The numeral account, catching and labelling of jerboa. *Mater. Poznan. Faun. Flor. SSSR, N.S. (Zool.)* 38 1960: 155-164 4 tabs. [Russian, English summary.]
- Tchernine, O.** The snowman and company. London (Robert Hale, Ltd.) 1961: pp. 1-174 text illustr.
- Teagle, W. G.** see Hayward.
- Tedford, R. H.** Clarendonian Insectivora from the Ricardo Formation, Kern County, California. *Bull. S. Calif. Acad. Sci.* 60: 57-76 4 figs. 2 tabs.
- Tedford, R. H.** see Stirtor.
- Tegner, H. (1).** The scrapes and pawing places of roe deer. *Gamekeeper* 64: 253-254.
- Tegner, H. (2).** Horn growth in infant roe deer. *Proc. zool. Soc. Lond.* 137: 635-637.

- Tembrock, G. (1).** Spezifische Lautformen beim Rotfuchs (*Vulpes vulpes*) und ihre Beziehungen zum Verhalten. Säugetierk. Mitt. **8** 1960: 150-154 5 figs.
- Tembrock, G. (2).** Lautforschung an *Vulpes* und anderen Caniden. Verh. dtsch. zool. Ges. 1960 (1961): 482-487 8 figs.
- Tenius, K.** see Rühmekorf.
- Terio, B.** Osservazioni e considerazioni intorno al plesso di Auerbach in embrioni, giovani ed adulti, di topo albino. Boll. Zool. **27** 1960: 67-82 7 figs.
- Tester, J. R. & Marshall, W. H.** A study of certain plant and animal interrelations on a native prairie in northwestern Minnesota. Occ. Pap. Minn. Mus. nat. Hist. No. **8**: 1-51 17 figs. 1 pl.
- Thaaler, C. S.** Variation in some salt-marsh populations of *Microtus californicus*. Univ. Calif. Publ. Zool. **60**: 67-94 21 figs. 3 tabs.
- Thenius, E. & Hofer, H.** Stammesgeschichte der Säugetiere. Eine Übersicht über Tatsachen und Probleme der Evolution der Säugetiere. Berlin, &c. (Springer-Verlag) 1960: pp. i-vi 1-322 text illustr.
- Thenius, E.** see Lüttig.
- Thomas, D. K.** The Gombe Stream Game Reserve, Tanganyika Notes & Records No. **56**: 34-39 1 pl. map.
- Thomas, R. M.** see Sanderson.
- Thompson, D. R.** see Lemke.
- Thompson, J. W.** The nerve supply to the nictitating membrane of the cat. J. Anat., Lond. **95**: 371-385 7 figs. 2 pls.
- Thompson, S. Y.** see Aschaffenburg.
- Tichowa, W. A.** Die Innervation des Ziliarmuskels. Z. mikr. anat. Forsch. **67**: 452-468 5 figs. [English summary.]
- Tien, D. van (1).** Notes sur une collection de micro-mammifères de la région de Hon-Gay. Zool. Anz. **166**: 290-298 2 figs.
- Tien, D. van (2).** Recherches zoologiques dans la région de Thai-Nguéyn (Nord-Vietnam). Zool. Anz. **166**: 298-308.
- Tihen, J. A.** see Charles.
- Tikhomirov, E. A.** Distribution and migrations of the seals in the Far East waters. Trud. Sovesh. Ichtiol. Kom. No. **12**: 199-210 3 figs. [In Russian.]
- Tilgner, D. J.** Richtlinien zur Qualitätsbewertung von Wildtieren. [Directives for the quality-valuation of game species.] Meded. Inst. Toeg. biol. No. **50** 1960 122-127 1 fig. [English summary.]
- Tischendorf, F.** Eine arterio-venöse Anastomose im Hülsgebiet der Kaninchenmilz. Anat. Anz. **109** 1960: 41-50 4 figs.
- Thachenko, A. A.** *Marmota bobac* Müller, its trade and agricultural significance. Zool. Zh. **40**: 1715-1724 7 tabs. [Russian, English summary.]
- Tobias, P. V. (1).** New evidence and new views on the evolution of man in Africa. S. Afr. J. Sci. **57**: 25-38 3 figs.
- Tobias, P. V. (2).** The work of the gorilla research unit in Uganda. S. Afr. J. Sci. **57**: 297-298.
- Tobien, H. (1).** Säugetierreste aus dem älteren Miozän von Ravelzhausen (Kreis Hanau, Hessen). Notzbl. heess. Landesamt. Bodenforsch. **88** 1960: 7-19 2 pls.
- Tobien, H. (2).** Zur Geschichte der pferdeartigen. Un paar hufer im Tertiär Europas. Z. dtsch. geol. Ges. **112** 1960: 580-581.
- Toerien, M. J.** The length and inclination of the primate cervical spinous processes. Trans. roy. Soc. S. Afr. **36**: 95-105 6 tabs.
- Tokita, K., Ito, R., Nishimuta, S., Kawasaki, Y., Nakamura, N., Saito, K., Isogai, S. & Ogawa, Y.** Electrocardiographical studies on bottle-nosed dolphin (*Tursiops truncatus*). Sci. Rep. Whales Res. Inst. **15** 1960: 159-165 5 figs.
- Toll, J. E.** see Conaway.
- Toll, J. E.** see Holten.
- Tomasch, J.** Dietary factors and nerve fibre myelination. J. Anat. Lond. **95**: 180-190 6 figs.
- Tomilin, A. G.** Some contemporary problems of the studying [of] whale biology. Trud. Sovesh. Ichtiol. Kom. No. **12**: 40-49 4 figs. [In Russian.]
- Tomlinson, A. R.** see Calaby.
- Tondeur, M.** Recherches sur la nature des granulations imprégnables par l'osmium dans les oeufs de petites mammifères. Arch. Biol. Paris **72**: 331-411 14 figs. 3 pls. 3 tabs. [English summary.]
- Tong, E. H., Senior, M. & Halnan, C. R. E.** An outbreak of malignant catarrh among the Père David deer. Proc. zool. Soc. Lond. **136**: 477-483.
- Torii, H. S.** The Harendô caves of Kyûshû, Japan. Cave Notes **3**: 17-20 3 figs.
- Toschi, A.** Mammalia. [In Biogeographia della Isola Pelagie.] R.C. Accad. Naz. **XL** (4) **11** 1960: 283-285.
- Tratz, E. P.** Neue Nachweise für das ehemalige Vorkommen des Steinwildes (*Capra ibex ibex*) in Salzburg. Säugetierk. Mitt. **9**: 163.
- Trefogli, C. A. & Garbini, J. D.** Nueva aportación para la microglia periférica (Polak). La microglia periférica en los corpusculos de Vater-Pacini. Rev. Fac. Agro. Vet. Buenos Aires **14** 1959: 3-12 [pagination of separate] 7 figs. [Spanish, English summary.]
- Trense, W.** Note sur quelques mammifères menacés du Proche-Orient. Terre et la Vie 1959 Suppl.: 81-85.
- Treus, V. D.** Exceptional case of twins of *Taurotragus oryx* Pall. Dopov. Akad. Nauk. Ukr. R.S.R. No. **6**: 822-824 2 figs. 1 tab. [Russian, English summary.]
- Treus, V. D. & Steklenev, E. P. (1).** Bison-yak hybrids. Dopov. Akad. Nauk. Ukr. R.S.R. No. **5**: 691-694 1 fig. 1 tab. [Russian, English summary.]
- Treus, V. D. & Steklenev, E. P. (2).** On the so-called "Leporids". Zool. Zh. **40**: 945-947 4 figs. 1 tab. [Russian, English summary.]
- Trevor, J. C.** Is "The Abominable Coalman" in the human family. New Scientist. **9**: 816-818 3 figs.
- [Trotimov, B. A.]** [The insectivore genus *Palaeoscapto* from the Oligocene of Asia.] Trav. Inst. Paléont. Akad. Sci. USSR **77** 1960: 35-40 3 figs. [In Russian.]
- Trosky, J. M. & Polder, E.** Some mammal remains from a Jackson County cave. Proc. Iowa Acad. Sci. **67** 1960: 607-609.
- Troyer, J. R. (1).** Histochemical and biochemical studies of liver glycogen in a hibernator, *Myotis lucifugus lucifugus*. J. cell. comp. Physiol. **54** 1959: 11-27 2 figs. 2 pls.

- Troyer, W. A. (2).** The Roosevelt elk on Afognak Island, Alaska. *J. Wildl. Mgmt.* 24 1960: 15-21 1 fig. 6 tabs.
- Troyer, W. A. (3).** The brown bear harvest in relation to management on the Kodiak Islands. *Trans. N. Amer. Wildl. Conf. No. 26*: 460-468 3 figs. 3 tabs.
- Trumler, E. (1).** Bemerkungen zur vorstehenden von I. Krumbiegel. *Säugetierk. Mitt.* 9: 3-4.
- Trumler, E. (2).** Entwurf einer Systematik der rezenten Equiden und ihrer fossilen Verwandten. *Säugetierk. Mitt.* 9: 109-125.
- Truslove, G. M. see Deol.**
- Truslove, G. M. see Grüneberg.**
- Tsubina, M. G.** The biological characteristics of nine inbred lines of mice. *Byull. Mosk. Obshch. Isp. Prir. Otd. Biol.* 66 (3): 114-133 8 figs. 12 tabs. [Russian, English summary.]
- Tsuboi, M. see Kubota.**
- Tsubouchi, R.** On the subcutaneous veins of the chest and abdomen of *Macacus cyclopis*. *Okajimas Folia Anat. Jap.* 37: 161-168 1 fig.
- Tung, Y-S. see Chiu.**
- Turček, F. J. (1).** Über Rötelausschäden in den slowakischen Wäldern im Jahre 1959. *Z. angew. Zool.* 47 1960: 449-456 5 figs.
- Turček, F. J. (2).** Eichengallen als „Ersatznahrung“ der Mäuse. *Z. angew. Zool.* 48: 215-220 4 figs. [English summary.]
- Turek, A. see Dobroruka.**
- Turnbull, W. D.** A Lance didelphid molar. With comments on the problems of the Lance therians. *Fieldiana Geol.* 10 1960: 525-537 2 figs.
- Turnbull, W. D. & Reed, C. A.** *Arctoryctes* and some other Chaldronian vertebrate microfossils from Nebraska. *Fieldiana Geol. Chicago* 14 1960: 41-57 6 figs.
- Turner, H. N. & Koch, J. H.** Studies on the sodium-potassium balance in erythrocytes of Australian Merino sheep. II. Observations on three Merino strains. *Aust. J. biol. Sci.* 14: 260-273 1 fig. 7 tabs.
- Turner, H. N. see Koch.**
- Tuzova, L. S. see Fateyev.**
- Twente, J. W.** Environmental problems involving the hibernation of bats in Utah. *Proc. Utah Acad.* 37 1960: 67-71.
- Twichell, J. B. see Buettner-Janusch.**
- Ueck, M.** Abstammung und Rassebildung der vorkolumbianischen Haushunde in Südamerika. *Z. Säugetierk.* 26: 157-176 4 figs. 3 tabs. [English summary.]
- Ulfstrand, S.** On the vertebrate fauna of the Azores. *Bol. Mus. Funchal* 14: 75-86.
- Ulmer, F. A. (1).** Gestation period of the lion marmoset. *J. Mammal.* 42: 253-254.
- Ulmer, F. A. (2).** The monkey in jungle, zoo and laboratory. *America's First Zoo* 13: 11-14 3 figs.
- Uloth, W. (1).** Zur Rindennahrung der Rötelaus (*Clethrionomys glareolus*). *Säugetierk. Mitt.* 9: 70.
- Uloth, W. (2).** Zur Ernährung des Fuchses (*Vulpes*)—Nutzen und Schaden. *Säugetierk. Mitt.* 9: 127-120 1 tab.
- Uloth, W. (3).** Erfolgreiche Kreuzung des Mufflons (*Ovis ammon musimon*) mit verwilderten Hausschafen (*O. a. aries*) des Mauna-Kea-Gebietes auf Hawaii. *Säugetierk. Mitt.* 9: 162-163 1 fig.
- Umidon, M.** Ricerche sulla morfologia e topografia delle anastomosi artero-venose del testicolo. *Monit. zool. Ital. Suppl.* 68 1960: 527-531 4 figs.
- Uryson, M. I.** New finds of *Gigantopithecus* osseous remains in China. *Sovet. antrop. Mosk.* 2 2 1958: 135-139 1 fig. [In Russian.]
- Uspensky, S. I.** Typical norms of cranial structure in man and monkeys as related to anthropogenesis. *Vopros. antrop. Mosk. No. 4* 1960: 34-61 10 figs. 6 tabs. [In Russian.]
- Utrecht, W. van.** Einige Notizen über Gewicht und Länge von Schweinswalen (*Phocaena phocaena*) aus der Nord- und Ostsee. *Säugetierk. Mitt.* 8 1960: 142-144 1 fig. 1 tab.
- Uys, J. M. C. see Mitchell.**
- Vacek, Z., Hahn, P. & Koldovsky, O.** The effect of rearing infant rats at three environmental temperatures on the structure of some of their organs. *J. Anat. Lond.* 95: 210-219 4 pls.
- [Vaitekunas, P. & Pashkevichus, I.]** [Discovery of mammoth remains at Vilnius.] *Byull. Kom. Izuch. Chetvert. Perioda* 24 1960: 95-99 3 figs. [In Russian.]
- Valdez, V.** Echo sounder records of ultrasonic sounds made by killer whales and dolphins. *Deep-Sea Res.* 7: 289-290 4 figs.
- Valentinic, S.** Komparative Studie einiger Reproduktionserscheinungen beim Rotwild des Alpen- und Au-Gebietes. [Comparison of reproduction phenomena of red deer.] *Meded. Inst. Toeg. biol. No. 50* 1960: 188-197 10 tabs.
- Vallois, H.-V.** Que savons-nous vraiment du Yéti? *Nature, Paris No. 3320*: 505-514 8 figs.
- Valverde, J. A. (1).** Aves del Sahara español (estudio ecológico del desierto). Segunda parte, cap. III. Mamíferos. Madrid (Instituto de Estudios Africanos) 1957, pp. 354-406 figs. 89-106 (also pp. 466-468).
- Valverde, J. A. (2).** Description du jeune bouquetin d'Espagne (*Capra pyrenaica*). *Mammalia, Paris* 25: 112-116 5 figs.
- van Bruggen, A. C.** More Cape lions discovered. *Afr. Wild Life* 15: 156.
- van der Walt, K. see Barnard.**
- Van Deusen, H. M. (1).** Yellow bat collected over South Atlantic. *J. Mammal.* 42: 530-531.
- Van Deusen, H. M. (2).** New Guinea record of the tube-nosed insectivorous bat, *Murina*. *J. Mammal.* 42: 531-533.
- Van Deusen, H. M. & Stearns, E. I.** Source of color in the fur of the green ring-tailed possum. *J. Mammal.* 42: 149-152 2 pls.
- van Eiten, R. C. see Ryel.**
- Van Gelder, R. G. & McLaughlin, C. A.** An unusual incisor in *Mephitis mephitis*. *J. Mammal.* 42: 422-423, 1 pl.
- Van Gelder, R. G. & Wingate, D. B.** The taxonomy and status of bats in Bermuda. *Amer. Mus. Novit.* No. 2029: 1-9 4 figs. 1 tab.
- van Valen, L.** A functional index of hypsodonty. *Evolution* 14 1960: 531-532.

- Van Wagenen, G. *see* Hurme.
- Varsharsky, S. N. *see* Krilova.
- Vasilin, G. D. Verzeichnis der Säugetiere Rumäniens. *Säugetierk. Mitt.* 9: 56-68.
- Vaughan, D. A. *see* Hannon.
- Vaughan, T. A. (1). Vertebrates inhabiting pocket gopher burrows in Colorado. *J. Mammal.* 42: 171-174.
- Vaughan, T. A. (2). Cranial asymmetry in the pocket gopher. *J. Mammal.* 42: 412-413.
- Vaughan, T. A. & Hansen, R. M. Activity rhythm of the plains pocket gopher. *J. Mammal.* 42: 541-543 1 fig. 1 tab.
- Veggetti, A. The morphological development of the lachrymal ducts in foetuses of *Bos taurus*. *Riv. Biol.* 52 1960: 293-322 32 figs. [Italian, English summary.]
- [Vekua, A. K.] (1). [A hippopotamus from the Lower Pleistocene of Georgia.] *Soob. Akad. Nauk Gruzinskoi SSR* 23 1959: 561-566. [N.V.]
- Vekua, A. K. (2). Early Quaternary Mammals from Akhalkalaki (Southern Georgia). *C.R. Acad. Sci. URSS (Earth Sciences)* 127 1959: 408-410. [In Russian.] *See also* Translation 127 1-6 1960: 661-662.
- Vekua, A. K. (3). A new species of fossil Horse from the Pleistocene of Akhalkalaki (South of Georgia). *C.R. Acad. Sci. URSS (Earth Sciences)* 132 6 1960: 1417-1420 3 figs. 2 tabs. [In Russian.] *See also* Translation 132 1-6 1961: 617-619 3 figs. 2 tabs.
- Velich, R. Notes on mammals from Nebraska and south-western Iowa. *J. Mammal.* 42: 92-94.
- Venzo, S. Rilevamento geologico dell'Anfiteatro Morenico del Garda. Parte II: Tratto orientale Garda-Adige & Anfiteatro Atesino di Rivoli Veronese. *Mem. Soc. ital. Sci. nat.* 13 1: 1-64 25 figs. 9 pls. map.
- [Vereshchagin, N. K.] (1). [Remains of Argali sheep *Ovis cf. ammon* Pall. in the bituminous deposits of the Apscheronk Peninsula.] *In* [Location of Quaternary Fauna and Flora at Binagadinak. 3.] *Trud. Estest.-Istori. Mus. G. Zardabi, Akad. Nauk. Azerb. SSR* No. 6 1953: 302-309 2 figs. 4 tabs. [In Russian.]
- Vereshchagin, N. K. (2). A gigantic perissodactyl from the Miocene of the northern Caucasus. *Paleont. Zh.* No. 1 1960: 107-112 3 figs. [In Russian.]
- [Vereshchagin, N. K.] (3). [Prevalence of dental decay in the Yakutian mammoth.] *Byull. Kom. Izuch. Chetvert. Perioda* 24 1960: 109-111 2 figs. [In Russian.]
- [Vereshchagin, N. K.] (4). [International symposium on the methods of studying mammals.] *Vestn. Akad. Nauk. USSR* No. 12 1960: 88-89. [In Russian.]
- Vereshchagin, N. K. (5). Outlook of breeding ondatra and nutria in nature in the Danube delta. *Zool. Zh.* 40: 1411-1414. [Russian, English summary.]
- Verevskina, G. L. *see* Shirkova.
- Verheyen, R. Sur la morphogenese et le remplacement des molaires chez l'éléphant d'Afrique (*Loxodonta*). *Bull. Inst. roy. Sci. nat. Belg.* 36 (49) 1960: 1-18 5 figs. 6 f.
- Verheyen, W. N. Recherches anatomiques sur *Micropotamogale ruwenzorii*. 1. La morphologie externe, les viscères et l'organe génital mâle. pp. 3-16 6 figs. 2. La myologie de la tête, du cou et de la patte antérieure. pp. 1-27 11 figs. *Bull. Soc. roy. Zool. Anvers* No. 21.
- Verheyen, W. N. *see* Rahm.
- Verme, L. J. Late breeding in northern Michigan deer. *J. Mammal.* 42: 426-427.
- Verts, B. J. (1). A device for anesthetizing skunks. *J. Wildl. Mgmt.* 24 1960: 335-336 3 figs.
- Verts, B. J. (2). A convenient method of carrying and dispensing baits. *J. Mammal.* 42: 283.
- Verts, B. J. & Barr, T. R. B. Apparent absence of rabies in Illinois shrews. *J. Wildl. Mgmt.* 24 1960: 438.
- Vesey-Fitzgerald, D. F. Drought—how do wild animals survive. *Wild Life, Nairobi* 2 (4) 1960: 36-38 2 figs.
- Vidal, N. Um *Toxodon* no Pleistoceno de Pernambuco. *Bol. Mus. nac. Rio de J. Geol.* 30 1959: 1-17 7 figs. [English summary.]
- Vietinghoff-Riesch, A. Frhr. von. Der Siebenschläfer (*Glis glis* L.). *Monogr. Wildsäugetiere* 14 1960: i-vii 1-196 51 figs. 26 tabs.
- Villa, B. The Mexican blood drinkers. *Nat. Hist. N.Y.* 70 7: 62-63, illustr.
- Villa R., B. (1). Combate contra los coyotes y los lobos en el norte de Mexico. *An. Inst. Biol. Univ. Mex.* 31: 463-499 14 figs.
- Villa R., B. (2). Dr. Angel Cabrera. *An. Inst. Biol. Univ. Mex.* 31: 511-512.
- Villa R., B. & Jimenez G., A. Acerca de la posicion taxonomica de *Mormoops megalophylla senicula* Rehn, y la presencia de virus rabico en estos murcielagos insectivoros. *An. Inst. Biol. Univ. Mex.* 31: 501-509, 1 fig. 3 tabs.
- Vilyamovskaya, M. I. Comparative characteristic of the volar and planter dermatoglyphics of the man, apes and monkeys. *Sovet. antrop. Mosk.* 2 2 1958: 123-133 3 figs. [In Russian.]
- Vinson, J. W. *see* Jellison.
- Viret, J. Catalogue critique de la faune des mammifères Miocènes de la Grive Saint-Alban (Isère). *Nouv. Arch. Mus. Hist. nat. Lyon.* No. 6: 53-81 1 pl.
- Viret, J. & Battaglia, J. Sur un crâne de *Tetralophodon grandisicensis* de Turquie. *Nouv. Arch. Mus. Hist. nat. Lyon* No. 6: 7-13 2 pls.
- Virveldyr, A. Norske dyrenavn mod tilhørende latinske navn. *Fauna, Oslo* 14 Bilag: 1-57. [Mammals pp. 42-46.]
- Vlastovskiy, W. G. (1). Some regularities of the variability of the long bones in the human and animal skeleton. *Sovet. antrop. Mosk.* 2 1 1958: 3-16 3 figs. 4 tabs. [In Russian.]
- Vlastovskiy, W. G. (2). Comparative analysis of correlations based on the long bones of man and animals. *Sovet. antrop. Mosk.* 2 2 1958: 3-19 1 fig. 7 tabs. [In Russian.]
- Vlček, A. *see* Cook.
- Vogel, C. (1). Zur systematischen Untergliederung der Gattung *Gorilla* anhand von Untersuchungen der Mandibel. *Z. Säugetierk.* 26: 65-76 8 figs. 5 tabs. [English summary.]
- Vogel, C. (2). Über den phylogenetischen Wert von Mandibelmmerkmalen bei höheren Primaten. *Z. morph. anthrop.* 51: 275-288 7 figs. (5 on pl.) 2 tabs. [English summary.]
- Vogl, R. J. *see* Beals.

- Vokác, Z. Paracrystalline hemoglobin as a species difference between *Rattus norvegicus* and *Rattus rattus*. *Nature*, Lond. 190: 641-642 2 figs.
- Voino, M. S. A comparison of the form of human and ape brains by measurement and contour drawing. *Sovet. antrop. Mosk.* 2 4 1958: 51-63 4 figs. [In Russian.]
- Voll, J. [Ed.]. Pedigree book of the Przewalski horse. Prague. [Published by Prague Zoological Garden.] Unpaginated 14 photos.
- Voronov, A. G. & Kozhevnikova, R. K. On the study of *Ochotona pusilla* nutrition. *Byull. Mosk. Obshch. Isp. Priro. Otd. Biol.* 66 (2): 26-32 5 tabs. [Russian, English summary.]
- Vorontsov, N. N. (1). Species of Palearctic hamsters (Cricetinae, Rodentia) in status nascenti. *Dokl. Akad. Nauk. SSSR (Trans.) Biol. Sci.* 132 1960: 491-493 4 figs. 1 tab. [Russian original pp. 1448-1451.]
- Vorontsov, N. N. (2). Tempo of evolution in hamsters (Cricetinae) and some factors determining its rate. *Dokl. Akad. Nauk. SSSR (Trans.) Biol. Sci.* 133: 639-642 1 fig. 1 tab. [Russian original 1960 p. 980.]
- Vorontsov, N. N. (3). Ecological and some morphological peculiarities of red-backed voles (*Clethrionomys tilius*) of the European North East. *Trud. zool. Inst. Akad. Nauk. SSSR* 29: 101-136 25 figs. 13 tabs. [In Russian.]
- Vorren, Ø. The reindeer industry. *Tromsø Mus. Skr.* 8 1960: 172-190 6 figs.
- Wada, J. A. Modification of cortically induced responses in brain stem by shift of attention in monkeys. *Science* 133: 40-42 1 fig.
- Wada, K. Studies on the changes in some characters of Japanese macaque during post-natal development. I-II. Changes in cranial characters. *Zool. Mag. Tokyo* 69 1960: 299-308 13 figs. [Japanese, English summary.]
- Waite, C. B. & Hawley, R. G. [Distribution of badger sets on the south side of Sheffield.] In Linton, D. L. [Ed.]. *Sheffield and its region 1956*: 320 (Appendix pt. 4).
- Wakefield, N. (1). Recent mammal bones in the Buchan district. *Vict. Nat. Melb.* 77 1960: 227-240 4 figs. 1 tab.
- Wakefield, N. (2). Victoria's rock-wallabies. *Vict. Nat. Melb.* 77: 322-332 7 figs. 1 pl.
- Wakefield, N. see George.
- Walker, B. E. The association of mucopolysaccharides with morphogenesis of the palate and other structures in mouse embryos. *J. Embryol. exp. Morph.* 9: 22-31 4 pls. 2 tabs.
- Wallace, M. E. Affinity: evidence from crossing inbred lines of mice. *Heredity* 16: 1-23 8 tabs.
- Wallin, L. Territorialism on the hunting ground of *Myotis daubentoni*. *Säugetierk. Mitt.* 9: 156-159 1 fig.
- Walther, F. Zum Kampfverhalten des Gorenuk (*Liocranus walleri*). *Nat. u. Volk* 91: 313-321 7 figs.
- Walvius, M. R. A discussion of the size of recent red deer (*Cervus elaphus* L.) compared with prehistoric specimens. *Beaufortia*, Amsterdam 9: 75-82.
- Wang, T. The occurrence of *Stegodon* and *Merck's* rhinoceros near Taiyuan, Shansi. *Vertebrata Palasiatica* 1961: 160-163 1 pl. [In Chinese.]
- Ward, A. L. Mountain pocket gopher food habits in Colorado. *J. Wildl. Mgmt.* 24 1960: 89-92 3 figs.
- Warner, L. & Brown, M. C. Techniques for studying microcirculation in the eye. *Anat. Rec.* 138 1960: 399-415 3 pls.
- Wasilewski, W. (1). Angaben zur Biologie und Morphologie der Kurzohrmaus, *Pitymys subterraneus* (de Sélys Longchamps 1835). *Acta Theriologica* 4 1960: 185-247 10 figs. 14 tabs.
- Wasilewski, W. (2). Relicts of a woolly rhinoceros *Coelodonta antiquitatis* (Blum.) in the Pleistocene deposits of Bychawa near Lublin. *Kwart. Geol.* 4: 539-544 2 figs. 1 pl. [Polish, English summary.]
- Wassil, K. (1). Further observations on *Gerbillus simoni* Lataste from the Egyptian Province (U.A.R.). *Bull. Zool. Soc. Egypt.* 15 1960: 29-31 1 fig.
- Wassil, K. (2). Studies on the osteology of Egyptian jerboas. *Bull. Zool. Soc. Egypt* 15 1960: 71-92 15 figs. 2 pls.
- Waters, J. H. *Clethrionomys* and *Peromyscus* in southeastern Massachusetts. *J. Mammal.* 42: 263-265 1 fig. 1 tab.
- Waters, J. H. & Ray, C. E. Former range of the sea mink. *J. Mammal.* 42: 380-383 1 fig.
- Watson, G. E. Behavioral and ecological notes on *Spalax leucodon*. *J. Mammal.* 42: 359-365.
- Watson, H. C. see Edmundson.
- Watson, J. S. Feral rabbit populations on Pacific Islands. *Pacif. Sci.* 15: 591-593.
- Wauer, R. H. Peculiar actions of coyote and kit fox. *J. Mammal.* 42: 109.
- Wayne, W. J. (1). The Darrow mastodon. *Proc. Ind. Acad. Sci.* 69 1960: 182.
- Wayne, W. J. (2). Range extension of the Allegheny woodrat (*Neotoma magister*) in Indiana. *Proc. Ind. Acad. Sci.* 69 1960: 311.
- Weaver, L. A. & Michels, K. M. Methodical factors affecting the formation of learning sets by rats. *Anim. Behav.* 9: 4-7 2 figs. 1 pl. 2 tabs.
- Webb, S. D. The first American record of *Lantanothidium* Filhol. *J. Paleont.* 35: 1085-1087 1 fig.
- Webb, W. L. Forest wildlife management in Germany. *J. Wildlife Mgmt.* 24 1960: 147-161.
- Webster, C. G. see Llewellyn.
- Węgrzyn, M. & Serwatka, S. Ligamentum sacrotubercule latum bei *Bison bonasus* (Linnaeus 1758) und *Bos taurus* (Linnaeus 1758). *Acta Theriologica* 5: 73-97 6 figs.
- Weidenbacher, G. H. see Wilber.
- Weigel, I. Das Fellmuster der wildlebenden Katzenarten und der Hauskatze in vergleichender und stammesgeschichtlicher Hinsicht. *Säugetierk. Mitt.* 9, Sonderheft: 1-120 27 figs.
- Weill, J. D., Mandel, P. & Kayser, C. Etude quantitative des acides nucléiques de quelques tissus chez la marmotte au cours du sommeil hivernal et durant l'état de veille de l'été. *Bull. Soc. Chim. biol.* 39 1957: 1395-1407. [English summary.]
- Wiener, A. S. & Gordon, E. B. (1). The blood groups of chimpanzees: the Rh-Hr (CDE) blood types. *Amer. J. phys. anthrop.* 19: 35-43 3 tabs.

- Wiener, A. S. & Gordon, E. B. (2). The blood groups of chimpanzees. A-B-O groups and M-N types. *Amer. J. phys. anthrop.* **18** 1960 : 301-311 4 tabs.
- Weiner, J. S. The East African fossil men. *New Scientist* **9** : 534-536 5 figs.
- Weir, J. A. Sex ratio related to sperm source in mice. *J. Hered.* **49** 1960 : 223-227 1 fig.
- Weiskrantz, L. & Cowey, A. A device for measuring food motivation in the monkey. *Anim. Behav.* **9** : 1-3 2 figs.
- Weiskrantz, L. *see* Lovell.
- Weitzman, E. D., Ross, G. S., Hodos, W. & Galambos, R. Behavioral method for study of pain in the monkey. *Science* **133** : 37-38 1 fig.
- Welch, R. M., Hanly, E. W. & Guest, W. The deoxyribonucleic acid (DNA) deviations in the semen spermatozoa of bulls of unknown fertility under two years of age and its relationship to motility, count and morphology. *J. Morph.* **108** : 145-163 3 tabs.
- Wells, L. H. (1). "Human", "Hominine", "Hominid". *Man* **59** 1959 : 30-31.
- Wells, L. H. (2). Mammalian remains from late Stone Age sites in the George-Knysna area. *S. Afr. J. Sci.* **56** 1960 : 306.
- Wells, W. W. *see* Krutzsch.
- Wendt, H. Auf Noas Spuren. Hamm, Westfalen (G. Grote) 1956, pp. i-viii, 1-574, 63 pls. text illustr.
- Wernert, P. *see* Bouchud.
- Whalen, R. E. Strain differences in sexual behaviour of the male rat. *Behaviour* **18** : 199-204 1 tab.
- Wheat, J. D. Harelin in shorthorn cattle. *J. Hered.* **51** 1960 : 99-101 3 figs.
- White, J. A. & Downs, T. A new *Geomys* from the Vallecito Creek Pleistocene of California. *Contr. Sci. Los Angeles* No. **42** : 1-34 17 figs. 8 tabs.
- White, K. L. Notes on use of Clover one-shot deer marker. *J. Wildl. Mgmt.* **24** 1960 : 102.
- White, K. L. *see* Taber.
- White, R. W. Some foods of the white-tailed deer in southern Arizona. *J. Wildl. Mgmt.* **25** : 404-409, 4 tabs.
- Whitehead, G. K. Saving the steinbock from extinction. *Meded. Inst. Toeg. biol.* No. **50** 1960 : 198-200 1 fig.
- Whitmore, F. C. Fossil mammals from Ishigaki-Shima, Ryukyu-Rettō. *Prof. Pap. US geol. Surv.* **400B** 1960 : B372-B374.
- Wick, W. Q. & Penttilä, H. E. Beaver litter of seven from Skagit County, Washington. *Murrelet* **38** 1957 : 7.
- Wieckowska, W. & Kraszewski, St. Pancreatography in dog. *Folia Morph. Warszawa* **11** 1960 : 323-329 6 figs. [Polish, English summary.]
- Wiegert, R. G. Nest construction and oxygen consumption of *Condylura*. *J. Mammal.* **42** : 528-529.
- Wight, H. M. & Conaway, C. H. Weather influences on the onset of breeding in Missouri cottontails. *J. Wildl. Mgmt.* **25** : 87-89 2 figs.
- Wight, M. Talking of Welsh wolves. *Gamekeeper* **64** : 282 1 fig.
- Wijngaarden, A. van (1). The population dynamics of four confined populations of the Continental vole *Microtus arvalis* (Pallas). *R.I.V.O.N. Meded.* No. **84** [also Versl. Landbouwkundige Onderzoekingen No. **66** 22] 1960 : 1-28 8 figs. 4 tabs.
- Wijngaarden, A. van (2). De Nederlandse knaagdieren (Rodentia). *Wet. Meded. ned. Naturh. Ver.* No. **40** : 1-31 figs. [English summary.]
- Wijngaarden, A. van (3). A wild raccoon, *Procyon lotor* (L.), trapped in the Netherlands. *Natuur. Maandbl.* **50** 5-6 : 54-55 [also R.I.V.O.N. Meded. No. **96**]. [Dutch, English summary.]
- Wijngaarden, A. van & Lensink, B. M. De verspreiding van der zoogdieren in de Zuidelijke IJsselmeerpolders in 1957. *Versl. en Meded. Plantenz. k. Dienst.* No. **134**, 1959 : 162-169 2 figs. 1 map 2 tabs. [English summary.]
- Wilber, C. G. & Weidenbacher, G. H. Swimming capacity of some wild mammals. *J. Mammal.* **42** : 428-429 1 tab.
- Wilde, J. de & Nieuwenhoven, P. J. van. Waarnemingen betreffende de winterslaap van vleermuizen. *Pub. naturh. Genootsch. Limburg* No. **7** 1955 : 51-82 31 figs. 3 tabs. [English summary.]
- Wilke, F. Fat content of fur-seal milk. *Murrelet* **39** 1958 : 40.
- Wilke, F. & Fiscus, C. H. Gray whale observations. *J. Mammal.* **42** : 108-109.
- Wilkinson, H. E. The rediscovery of Leadbeater's possum, *Gymnobelideus leadbeateri* McCoy. *Vict. Nat. Melb.* **78** : 97-102 3 figs.
- Wilks, B. J. & Laughlin, H. E. Roadrunner preys on a bat. *J. Mammal.* **42** : 98.
- Wilks, B. J. *see* Raun.
- [Willan, R. G. M.] Ufiti—Nyasaland's 'mystery' animal—is an ordinary chimp. *Wild Life Nairobi* **3** (3) : 21-23 2 figs.
- Williams, E. H. Ajai's Island. *Wild Life & Sport* **2** (2) : 33-37.
- Williamson, G. R. (1). Two kinds of minke whale in the Antarctic. *Norsk Hvalfangsttid.* **50** : 133-141 4 figs. 3 tabs.
- Williamson, G. R. (2). Winter sighting of a humpback suckling its calf on the Grand Bank of Newfoundland. *Norsk Hvalfangsttid.* **50** : 335-341 2 figs.
- Wilson, E. J. Ultra-violet lamps and rodent control. *Parasitica* **16** 1960 : 119-125 2 tabs.
- Wilson, J. A. Miocene carnivores, Texas coastal plain. *J. Paleont.* **34** 1960 : 983-1000 9 figs. 3 tabs.
- Wilson, R. W. Early Miocene rodents and insectivores from northeastern Colorado. *Paleont. Contr. Univ. Kansas Vert.* **7** 1960 : 1-92 131 figs. tabs.
- Wilsson, L. [Beavers on the River Faxälven and its tributaries.] *Zool. Revy* **22** (2) 1960 : 2-16 6 figs.
- Wimsatt, W. A. Some problems of reproduction in relation to hibernation in bats. *Bull. Mus. comp. Zool. Harv.* **124** 1960 : 249-269 2 figs. 1 pl. 1 tab.
- Wimsatt, W. A. & Guerriere, A. Care and maintenance of the common vampire in captivity. *J. Mammal.* **42** : 449-455 1 fig. 1 pl.
- Wingate, D. B. *see* Van Gelder.
- Winston, H. *see* Lindsey.
- Witter, J. F. *see* O'Meara.
- Wodzicki, K. Ecology and management of introduced ungulates in New Zealand. *Terre et la Vie* **108** : 130-157 8 figs. 1 tab.

- Wójcik, Z.** Observations on the fluctuations in body weight and on the course of the sexual cycle in three successive generations of mouse females. *Zool. Polon.* 10 1959-1969 [1961]: 309-324 4 figs.
- Wolfe, C. W.** see Long.
- Wolfe, H. G. (1).** Blood-pH differences in two inbred strains of mice. *J. Hered.* 50 1959: 155-158 2 tabs.
- Wolfe, H. G. (2).** Selection for blood p-H in the house mouse. *Genetics* 46: 55-75 4 figs. 7 tabs.
- Woliński, Z.** see Kowalska.
- Woliński, Z.** see Taworski.
- Wolodiko, N.** Zur Innervation des Ductus thoracicus der Katze. *Anat. Anz.* 109: 201-216 15 figs.
- Won, P.-O. & Woo, H.-C.** On the roof-rat of Dagelet Island. *J. appl. Zool.* Seoul 3 1960: 49-52 5 tabs. [Japanese, English summary.]
- Wong, B. Y.-S.** see Buettner-Janusch.
- Woo, H.-C.** see Won.
- Woo, J.-K. (1).** Fossil human skull from Tzeyang District, Szechuan Province. In **Pei, W. C. & Woo, J.-K.** Tzeyang Paleolithic man. *Mem. Inst. Vert. Pal. Acad. Sinica* 1 1957: 13-49 1 fig. 4 pls. 6 tabs. [Chinese & English.]
- Woo, J.-K. (2).** Summary. In **Pei, W.-C. & Woo, J.-K.** Tzeyang Paleolithic man. *Mem. Inst. Vert. Pal. Acad. Sinica* 1 1957: 69-71. [Chinese & English.]
- Woo, J.-K.** see Pei.
- Wood, A. E.** see Burt.
- Wood, A. J., Nordan, H. C. & Cowan, I. McT.** The care and management of wild ungulates for experimental purposes. *J. Wildl. Mgmt.* 25: 295-302 8 figs. 2 tabs.
- Wood, A. J.** see Miller.
- Wood, H. E.** *Planiceps* Scott & Osborn, 1887 (*Hyracodon*): proposed suppression under the Plenary Powers as a nomen dubium (Mammalia). *Bull. zool. Nomencl.* 18: 208.
- Woodburne, M. O.** Upper Pliocene geology and vertebrate paleontology of part of the Meade Basin, Kansas. *Pap. Mich. Acad. Sci.* 46: 61-94 4 figs. 4 pls. 5 tabs.
- Woodgerd, W.** see Craighead.
- Woods, J. T.** The genera *Propleopus* and *Hypsioprymnodon* and their position in the Macropodidae. *Mem. Qd. Mus.* 13 1960: 199-212 4 figs. 2 tabs.
- Woolley, P.** see Shield.
- Wright, B. S. (1).** Predation on big game in East Africa. *J. Wildl. Mgmt.* 24 1960: 1-15 7 tabs.
- Wright, B. S. (2).** The latest specimen of the eastern puma. *J. Mammal.* 42: 278-279 1 pl.
- Wright, R. V. S.** Hominid nomenclature. *Man* 59 1959: 217.
- Wright, S.** The genetics of vital characters of the guinea pig. *J. cell. comp. Physiol.* 56 Suppl. 1 1960: 123-151 7 figs. 12 tabs.
- Wu, X.-Z.** The discovery of *Zinjanthropus* in Africa. *Vertebrata Palasiatica* 1961: 168-171 1 fig. [Chinese, English summary.]
- Wunder, C. C.** Altered growth of animals after continual centrifugation. *Proc. Iowa Acad. Sci.* 67 1960: 488-494 6 figs.
- Wunder, C. C.** see Briney.
- Wüsthube, C.** Beiträge zur Kenntnis besonders des Spiel- und Beuteverhaltens einheimischer Musteliden. *Z. Tierpsychol.* 17 1960: 578-613 28 figs. 9 tabs. [English summary.]
- Yablokov, A. V.** Some features of the urogenital system in cetaceans. *Byull. Mosk. Obsch. Isp. Prir. Otd. Biol.* 66 (2): 33-38 4 figs. [Russian, English summary.]
- Yablokov, A. V.** see Jablokov.
- Yakimov, V. P.** The discovery of the bone remains of a new representative of the Australopithecinae in East Africa. *Vopros. antrop. Mosk. No. 4* 1960: 151-153 3 figs. [In Russian.]
- Yamada, H.** see Lillie.
- Yamada, K.** Histochemical studies on epithelial lipid in the gallbladder of the mouse. *Okajimas Folia Anat. Jap.* 36 1960: 233-241 1 fig. 1 pl.
- Yang, H.-C.** see Nishiwaki.
- Yasuda, K., Aoki, T. & Montagna, W.** The skin of primates. IV. The skin of the lesser bushbaby (*Galago senegalensis*). *Amer. J. phys. anthrop.* 19: 23-33 3 pls.
- Yasuda, K.** see Montagna.
- Yazan, Yu P.** Action of air temperature on the activity of elks during their autumnal-winter migration. *Zool. Zh.* 40: 469-471 3 figs. 1 tab. [Russian, English summary.]
- Yen, Y.** see Lin.
- Yoakum, J.** Recent chinchilla release in Oregon. *Murrelet* 40 1959: 19-20.
- Yocom, C. F., Stumpf, W. A. & Perkins, K. M.** Status of beaver formerly introduced into the Mad River and river otter in northwestern California. *Murrelet* 37 1956: 18-19.
- Yoon, C. H. (1).** Waddler, a new mutation, and its interaction with quivering. *J. Hered.* 50 1960: 238-244 4 figs.
- Yoon, C. H. (2).** Genetic and non-genetic factors affecting the quivering condition in mice. *Amer. Nat.* 94 1960: 435-440 3 figs.
- Youatt, W. G.** see Erickson.
- Young, F. A.** see Rubadeau.
- Young, R. W.** see Moss.
- Young, S.** Big game enclosures in wildlife management in Utah. *Proc. Utah Acad. Sci.* 32 1955: 65-69.
- Zabinski, J.** A propos du bison d'Europe. *Terre et la Vie* 108: 113-115.
- Zalkin, V. I.** The mammals of the Oka river basin and of the Upper Volga at the beginning of the present era. *Byull. Mosk. Obsch. Isp. Prir. Otd. Biol.* 66 1: 23-29 4 figs. 9 tabs. [Russian, English summary.]
- Zapfe, H.** Ein Primatenfund aus der miozänen Molasse von Oberösterreich. *Z. Morph. Anthropol.* 51: 247-267 4 figs. 2 tabs. [English summary.]
- Zaphiro, D. R. P. & Talbot, L. M.** The use of light aircraft in East African wild life research and game management. *Oryx* 6: 190-199.
- Zarrow, M. X.** see Ross.
- Zarzycki, J. & Czechowiec, K.** Histogenesis of os priapi in dog. *Folia morph. Warsz.* 20: 19-25 4 pls. [Polish, English summary.]
- Zasukhin, D. N.** see Shevkunova.

- Zawistowski, S.** see *Lajda*.
- Zel, M. M.** see *Erasmus*.
- Zeller, F.** "Schnurzel", ein Reisenotter. *Kosmos*, Stuttgart 57 : 457-461 3 figs.
- Zemsky, V. A.** About life duration of finwhales and the periods of their fecundity. *Trud. Sovesh. Ichtiol. Kom. No. 12* : 60-67 4 tabs. [In Russian.]
- Zenker, W. & Salzer, G. M.** Die Histologie des chievitz'schen Organs. *Acta anat.* 44 : 286-321 18 figs. [English summary.]
- Zenkovitch, B. A.** Observations of the marine mammals and some other animals in Arctic expedition of the USSR Academy of Sciences (1957-1958). *Trud. Sovesh. Ichtiol. Kom. No. 12* : 23-24. [In Russian.]
- Zhou, H. X.** Geomorphology and Quaternary Geology in the vicinity of the *Gigantopithecus*-cave of Kwangsi. *Paleovertebrata et Paleanthropologia* 2 (1) 1960 : 69-73. [In Chinese] [N.V.]
- Ziegler, A. C.** Occurrence of os clitoridis in *Microtus*. *J. Mammal.* 42 : 101-103 1 fig.
- Zimina, R. P. & Merkova, M. A.** The ecology of *Sicieta tianschanica* Salen. in the northern Tian Shan. *Mater. Poznan. Faun. Flor. SSSR, N.S. (Zool.)* 38 1960 : 183-207 1 fig. 11 tabs. [Russian, English summary.]
- Zimmermann, K.** see *Matthey*.
- Zimmermann, W.** Untersuchungen am Hauskaninchen III. Die Wasserstoffionenkonzentration im weiblichen Genitaltrakt und in der Keimblase vor, während und nach der Nidation. *Verh. dtsch. zool. Ges.* 1960 (1961) : 143-149 4 figs.
- Zimny, M. L.** Phosphates as related to intermediary metabolism in hibernators. *Bull. Mus. comp. Zool. Harv.* 124 1960 : 457-473 3 figs.
- Zimny, M. L. & Bourgeois, C.** Histochemical localization of some enzymes in the kidney of a hibernator. *J. cell. comp. Physiol.* 56 1960 : 93-101 2 figs. 2 pls.
- Živančević, V.** Abstammung und Rolle der Jagdtrophäen. *Pos. Izd. Mus. Hist. nat. Belgr. No. 26* 1959 : 1-58 22 figs. [Slav, German summary.]
- [**Zolinkov, V. G.**] [A new skeleton of *Mammonteus primigenius* (Bl.) from Megino-Kangalassk, Yakut ASSR.] *Byull. Kom. Tzuch. Chetvert. Perioda* 24 1960 : 104-109 2 figs. 2 tabs. [In Russian.]
- Zubko, Ya. P. & Ostryakov, S. I.** On the reproduction of *Ellobius talpinus* Pallas in the south of the Ukraine. *Zool. Zh.* 40 : 1577-1579 2 tabs. [Russian, English summary.]
- Zukowsky, L.** Der Geweihabwurf von *Cervus (Dama) mesopotamicus* in der Hagenbeckschen Trophäensammlung. *Säugetierk. Mitt.* 9 : 69.
- Study of *Manis*, Mohr (2); Detailed study of rat and mouse as laboratory animals, Hagemann & Schmidt; Detailed monograph of Russian *Hipparion*, Gabuniya (1); History of horse, Koch; Supplement to Dictionary of Livestock Breeds, Mason, I. L.; Ungulates of the U.S.S.R., Heptner & others; Fossil oxen of the Old World, Burchak-Abramovich (7).**
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Economics: Fur and Wool.—Economics of beaver in Kansas, *Henderson*; Mink farming in Britain, *Stevenson*; Economics of Caspian seal, *Badamshin*.

Economics: Whaling.—History of whaling, *Johnsen*; Problems of whale conservation, *Laws* (1); Whaling results for 1960, *Anon* (26); International Whaling Statistics, *Anon* (23); Humpback whaling in Ryukyuan waters, 1960, *Nishiwaki*; Australian humpback catch, 1960, *Chittleborough* (2); Australian whaling, 1960, *Chittleborough* (1); Antarctic 1960/1961 season, *Anon* (19); Antarctic whaling 1960/61, *Anon* (21); Australian 1960 season, *Anon* (18); Whaling off Azores, *Anon* (22); Whale fishing possibilities in Bering Sea, *Arsejiev* (1);

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DISTRIBUTION AND FAUNAS

PALAEARCTIC REGION

General.—Gromov; **Kowalski (6)**; **Lehmann (1)**; **Matthey (1)**; **Moore (2)**; **Sidorowicz (1)**; **Vorontsov (1)**; Asia, **Petter (1)**.

Europe: General.—Constant (2); **Eisenbraut (1)**; **Grummt**; **Heerdt & Sluiter (2)**; **Mohr (1)**; **Petter (1)**; **Roe**; **Vorontsov (3)**; **Walvis**; C. Europe, **Gaffrey (3)**; Eurasia, **Formosov & Kodachova**; Mediterranean region, **Conturier (1)**.

British Isles General.—**Christian, G.**; **Corbet**; **Davis, R. A. (2)**; **Fitter**; **Hewer & Backhouse**; **Street**; **Tegner (1)**.

England.—Surrey, **Lord, J. C.**; New Forest, **Hook (1)**; **Pigott**; Wiltshire, **Rothschild**; **Bardsey Is.**, **Humphries**; E. England, **Davis, R. A. & Jensen**; Essex, **Drummond**; Norfolk, **Taylor Page & others**; Yorkshire, **Anon (1)**; **Waite & Hawley**; Farne Islands, **Conlson & Hickling (1)**, (2).

Wales.—**Edwards, F. B.**; **Hill, G. R.**; **Lockley**; **Wight**; **Skomer**, **Fullager & others**; **Saunders**.

Scotland.—**Anderson, M. L.**; **Lowe**; N.W. Scotland, **Delany**; Perthshire, **Batcheler**; Ross-shire, **Lockie**; Hebrides, **Delany**; Fair Isle, **Delany & Davis**; Faroe Is., **Dover**; St. Kilda, **Jewell**; **Sheppard**.

Ireland.—**Armagh**, **Jackson (1)**; **Monaghan**, **Jackson (1)**; **Fermanagh**, **Carlisle & others**; **Antrim**, **Scott**; **Clare**, **Jackson (2)**; Co. Kildare, **Rutledge**.

Channel Isles.—**Herm Island**, **Cranbrook & Crowcroft**.

France.—**Barriety**; **Constant (1)**; **Dollfus**; **Koby (3)**; **Roy**; **Sluiter & Heerdt**; S. France, **Jullien & others**; **Brittany**, **Brosselin**; **Lami**; Provence, **König & König**; Rhône, **Richard B.**; Alsace, **Gouin & others**.

Spain.—**Anon (27)**.

Portugal.—**Da Cunha**.

Holland.—Anon (32); Bree (1), (2), (3); Glas; Haften; Heerd & Stutter (1), (3); Wijngaarden (2), (3); Wijngaarden & Lensink; Wilde & Nieuwenhoven.

Belgium.—Bernard.

Germany.—Eisentraut (1), (2), (3); Engländer & Johnen; Felten & Klemmer; Frank (1), (2); Hoehli; Hoffmann; Hummelsch; Ruhmekorff; Schöffelen (2); Schindler; Schmaus; Schmook; Schmetter; Schöber (2); Uloth (1); Webb, W. L.; Westphalia, Feldmann; Salzberg; Tratz; Oldenburg, Havelkost; Hanover, Ruhmekorff & Tenius; Bohemia, Dobroruka & Turek; Hanak & Figala; Bavaria, Issel & Issel; Saxony, Natuschke.

Austria.—Abel (1), (2); Bauer & Steiner; Eisentraut (1); Festetics; Gruber; Kepka (1)(2); Knorre; Niethammer.

Czechoslovakia.—Gaisler; Hell; Šýkora (1); Szunyoghy (2); Turček (1), (2); Carpathians, Dobroruka (1); Kowalski (3); Tatarinov; S. Carpathians, Firchuk.

Switzerland.—Burekhardt (1); Burekhardt & others; Hogg; Meylan; Schloeth (2); Schloeth & Burekhardt; Schwarzenbach; Alps, Burekhardt (1) (2); Couturier.

Italy.—Lehmann (3), (4); Mözser Bruijs; Lampedusa, Toschi; Columbretes Is., Españaol.

Hungary.—Szederjéi & Sartorius; Székessy; Szunyoghy (1).

Roumania.—Almăsan & others; Barbu; Kurskov; Manolache & others; Popescu; Schnapp & Hellwing (2); Sticles; Vasiliu; Vereschagin (5).

Balkans.—Yugoslavia, Djulic (1), (2); Gličić; Mirić; Valentić; Croatia, Djulic (1); Bulgaria, Christov; Markov.

Greece.—Hatzisarantos & Kanellis; Ondrias (3); Watson, G. E.; Thrace, Osborn.

Cyprus.—Harrison, D. L. (3).

Poland.—Anon (28); Adamczewska; Bazan-Kubik (1), (2); Buchalczyk, T. (1), (2); Buchalczyk & Raczynski; Chudoba & Huminski; Ehrlich; Haber; Kowalska-Dyres; Kowalski (4), (5); Krzanowski (1), (2); Świecimski; Surdacki; Skoczeń; Sidorowicz (2); Wasilewski (1).

Denmark.—Andersen.

Iceland.—Gudmundsson; Hook (2).

Norway.—Haftorn (1); Lund; N. Norway, Christiansen; Jakobsen, A.; Vorren.

Sweden.—Anon (24); Ahlén & Lennerstedt; Curry-Lindahl (1), (2); Borg; Hallander; Martinsson; Nilsson; Wilsson.

Estonia.—Ling.

Lithuania.—Maldziunaite (1), (2); Prusaite (1), (2), (3).

Finland.—Ahti; Artimo; Erkinaro; Jellison & others.

Spitzbergen.—Birkenmajer; Ferens; Lene; Lene & Synes.

U.S.S.R.—Anon (9); Bobrinskii; Dubrovsky; Heptner & others; Ismagilov, M. I.; Kahrlin; Karaseva; Khmelevskaya; Kirpichnikov; Kleinenberg (2); Kotov; Kraft; Lavrov; Lavrov & Hao-chuang; Poyarkov; Sablina; Sjögren; Surkov; Central U.S.S.R., Zalkin; C. Asia, Bannikov (1), (2); Lin & Yen; Soviet Arctic, Alarukka; Byelorussia, Kurskov; Petrovsky; Archangel region, Parovschikov (1), (2), (3); Kola region, Koshkina & Khalanski; Yakutia, Kapitonov; Siberia, G.; Matthay & Zimmermann; Volga Territory, Denisov;

Smirevskaya; Moscow Territory, Gabuzov; Kirov region, Alexandrova & Krasovskaya; Nakhichevan A.S.S.R. Alieva; Manych region, Kritskaya; Kamchatka, Ostrovnikov; W. Ustyurt, Soletsky; Karelia, Segal & Orlova; Komi A.S.R., Nikitina (2); Moldavia, Sokolov & Rafalovich; Ukraine, Charlemagne; Zubko & Ostrovsky; Kiev region, Rudnev; Armenia, Gambarjan & others; Adzharia, Avaliani; Azerbaijan S.S.R., Gromov; Caspian, Badamshin; Caspian region, Pavlov (1); Azov Sea, Kleinenberg (1); Black Sea, Kleinenberg (1); Pre-Aral, Nikitina (1); Rotschild; Kazakhstan, Afanas'ev; Ismagilov, M. M.; Skvortsov; Shubin; N. Kazakhstan, Karaseva; Kurdistan, Golvan & Rioux; Turkmenia, Heptner; Sapozhenkov (1), (2); Komi A.S.R., Kulik & Nikitina; Karakum, Marin & Rotschild; Sapozhenkov (3); Kysylkum, Marin & Rotschild; North Aral, Krilova & others; Amu-Daria, Mambetzhumaev; Uzbekistan, Bogdanov; Ishunin; L. Baikal, Kendakov; Olkhon Is., Lake Baikal, Litvinov; Tian Shan, Stronganova & Chu Tsing; Zimina & Merkova; Mongolia, Dawaa; Lavrov & Hao-chuang; E. Mongolia, Pavlov (2); Tannu Tuva Rep., Mongolia, Flint & Golovkin.

China.—Lavrov & Hao-chuang; Hong Kong, Romer.

Formosa.—Nishiwaki & Yang.

Japan.—Imaizumi; Jameson; King, J. E. (1); Ota & Jameson; Kyushu, Torii; Hokkaido, Kinoshita & Maeda; Sakhalin, Benkovski; Dagelet Island, Won & Woo; Kuriles, Betesheva; Ryukyu Is., Nishiwaki.

S.W. Asia.—Near East, Reed, C. A. (3); Trense; Middle East, Harrison, D. L. (3); Israel, Nevo; Nevo & Amir; Syria, Harrison & Lewis; Lebanon, Harrison, D. L. (3); Hooijer (2); Harrison & Lewis; Iran, Golvan & Rioux; Petter (3); Mesopotamia, Haltenorth (1); Turkey, Kahmann & Çağlar (1), (2), (3); Mursaloglu; Watson, G. E..

North Africa.—Kock & Schomber (1), (2); Egypt, Setzer (1), (2), (3); Wassif (1); Morocco, Brosset (1); Chapuis; Algeria, Pignat; Sales; Tunisia, Sales; Schomber & Kock; Sahara, Dekeyser & Derivot (2); Colchester; Gauthier-Pilters; Petter (3); Valverde (1).

ORIENTAL REGION

General.—Hill, J. E. (1); S.E. Asia, Siddiqi.

India.—Brossset (2); Dharmakumarsinhji; Gee (1); Grüneberg (5); Prasad (2); Silas; Afghanistan, Lindberg; Rajashan, Krishna & Prakash; Rajasthan, Prakash (2), (4), (6), (7); Madhya Pradesh, Sagreya; Himalaya, Hill, W. C. O. (2); Santapau & Abdulali (1); Tchernine; Assam, Gee (3); Shebbeare; Manipur, Gee (2); Orissa, Behura.

Ceylon.—De Silva; Jonklaas; Norris, C. E.; Spittel.

Burma, Indochina.—Burma, Hayman; Milton; Thailand, Takai; Indochina, Bohlken (2); Vietnam, Tien (1), (2).

Malaya.—Dhaliwal; Foenander; Harrison, J. L.; Hill, J. E. (2); Hialop (1), (2); Kitchener (3), (4), (5); Metcalfe; Selangor, McClure; Singapore I., Burkill.

Borneo.—Harrison, B. (2); Harrison, T. (1), (2), (3); Hill, J. E. (2); Sarawak, Hooijer (4); Medway (1), (2), (3); Schaller; North Borneo, Burgess; Stott & Selsor (1), (2), (3).

Indonesia.—Sumatra, Hill, J. E. (2); Skatte; Java, Erdbrink; Satmoko; Celebes, Schwarz; Bali, Peng; Lombok, Peng; Sumba, Peng.

ETHIOPIAN REGION

General.—Africa, Anon (15), (25), (29), Daubercies; Dekeyser (2); Foran; Graaf (2); Gremyatsky (2); Hillaby (3); Petter (1); Spinage; Talbot & Talbot.

N.E. Africa.—Sudan, Dobroruka (2); Merck; Ethiopia, Petrides (1); Somalia, Funsali & Simonetta (1), (2), (3); Simonetta (1).

East Africa.—Anon (12), (13), (14); Brooklesby; Brooks, A. C.; Grzimek & Grzimek; Talbot & Lamprey; Wright, B. S. (1); Zaphiro & Talbot; Tanganyika, Anon (11); Brooks, A. C.; Grzimek; Harrison, D. L. (2); Lithgow; Thomas; Uganda, Anon (10), (16); Baumgartel; Blower (1), (2), (4); Buss; Dart (2); Savidge; Tobias (2); Williams; Kenya, Grimwood; Harrison, D. L. (1), (4).

Rhodesias.—Ansell (4); Astley Maberly; Dasmann & Mossman; Holz; N. Rhodesia, Harrison, D. L. (1); Ansell (1), (2), (3); Fraser Darling; Grimwood & others; Mitchell & Uys; S. Rhodesia, Harrison, D. L. (1), (2); Hillaby (1); Hirst; Riney & Austen; Shelton; Bechuana-land, Barnard; Eloff (1).

Southern Africa.—Anon (2); Courtenay-Latimer; de V. Pienaar (2); Eloff (2); Freedman (1); Harrison, D. L. (1); Meester; Payne; St. Croix; van Bruggen; Wells (2); Zululand, Foster, W. E.; Schulz, K. C. A.; Nyasaland, Anon (30); Hanney; Sweeney; Willan; Transvaal, Meester (2); Orange Free State, Griesel; Kruger National Park, Dagg; Cape Province, Barnard & van der Walt; Bateman, J. A.; Pringle; S.W. Africa, Lehmann (2); Angola, Frade & Siero; Monard.

Congo.—Anon (16); Bargh; Dajoz; Pirlot (1), (2), (3); Pournelle (1); Rahm (1); Rahm & Verheyen; Smit; Vogel (1).

Central Africa.—C. Africa, Harrison, D. L. (1); Rahm (3).

West Africa.—Booth; Dunn, J. S.; Guinea, Eisentraut (5); Ivory Coast, Rahm (5); Ghana, Collins (1), (2); French West Africa, Blancou; Dekeyser (1); French Equatorial Africa, Blancou; Liberia, Kuhn.

Madagascar.—Madagascar, Jouffroy (2).

AUSTRALASIAN REGION

General.—Hill, J. E. (1).

Australia.—Anon (6); Calaby & Ratcliffe; Chittieborough (2); Lindgren; Northern Australia, Finlayson (1); Queensland, Mack; Van Densen & Stearns; New South Wales, Marlow (1); Ratcliffe; Taylor, J. M.; Woods; Victoria, Boyle; George & Wakefield; Wakefield (1), (2); Wilkinson; South Australia, Pilton; Central Australia, Finlayson (2); Fleay; W. Australia, Calaby & others; Gillham; Lundelius; Tasmania, Davies, J. L.; Guiler (3).

New Zealand.—Dwyer; Herter; Wodzicki.

New Guinea and Islands.—New Guinea, Van Deusen (2); Timor, Cabrier de Silva; Solomon Is., Ratcliffe.

NEARCTIC REGION

General.—Kowalski (6); Moore (2).

N. America.—Anon (31); Buechner (2); Dillon; Edwards, R. Y. (1); Fuller; Hall & Jones; Hoffmeister; Hoffmeister & de la Torre; Johnson & others; Jones & Mursaloğlu (2); Kotford (2); Longhurst; Lord, R. D. (1); Matthay (1); Moore (1); Pimlott; Stormont & others (1); Taber; Taylor, W. P.

Canada.—Banfield (1); Cameron; Kelsall; Quebec, Bider; Foster & Peterson; MacLeod & Cameron; Newfoundland, Dadds; Dadds & Mackiewicz; Williamson (2); Ontario, Ditchfield & others; Sealander; Manitoba, Buckner; Foster J. B.; Foster & Peterson; Priewert; Pruitt (2); Saskatchewan, Pruitt (2); Northwest Territories, Banfield (5); de Vos (1), (2); Pruitt (2); Ungava Peninsula, Harper; British Columbia, Edwards, R. Y.; Edwards, R. Y. (2); Geist; Meehan; Miller, R. G. & others; Racey; Rausch & Ritcey; Sheppe (2); Alberta, Fuller; Yukon, Banfield (2).

U.S.A.: General.—Fay; Gould & Brown; Petrides; Martin (2); Roth & others.

Eastern U.S.A.—New York, Klein; Patric & Webb; Stewart; Maryland, Manville & Shanahan; Massachusetts, Abbot & Belig; Waters; Waters & Ray; Rhode Island, Backus & Schevill; Pennsylvania, Guilday (1); Montgomery; Snyder & Christian; Snyder & others; Maine, Alkon; O'Meara & others; Wright, B. S. (2); Florida, Lord, R. D. (7); Griffo; Harlow, R. F. (1); Harlow, R. F. (2); Jennings & others; Manaro; Ray, C. E.; Virginia, Handley & others; Peacock & Peacock; West Virginia, Krutzsch; Georgia, Manville (3).

Middle U.S.A.—Ohio, Dexter; Ruffer; Stewart & Negus; Tennessee, Barr; Dunaway & Kaye (1), (3); Alabama, Adams; Barkalow (2); Holliman; Louisiana, Blair; Mississippi, Jones & Long; N. Carolina, Barkalow (1); Funderburg (1), (2); Hallman; Kaye; S. Carolina, Caldwell; Missouri, Brown, L. N. (1), (2); Conaway & others; Holten & Toll; Long (3); McKinley (1), (2); Martinson & others; Pilleri (2); Wight & Conaway; Kentucky, Brauer; Hall, J. S.; Indiana, Kirkpatrick (1), (2); Kirkpatrick & Hoffman; Martin (3); Wayne (2); Illinois, Brandon; Ferris & others; Lord, R. D. (4), (5), (6); Lord & Casteel; Mohr & Lord; Parmalee & others; Sanderson (3); Sanderson & Thomas; Vets & Barr; Michigan, Blouch; Erickson & Youatt; Gets (1), (2), (3), (4), (5), (6); Golley (3); Gysel; Howard & Evans; Schofield (1), (2); Short (1); Ryel & others; Verme; Wisconsin, Beals & others; Cook & Hale; Lemke & Thompson; Minnesota, Beer (3); Beer & MacLeod; Davis, W. H. & others; Gunderson (1); Morse & Balser; Priewert; Tester & Marshall; Iowa, Hauger (1), (2); Muir & Polder; Trosky & Polder; Velich.

Western U.S.A.—Nebraska, Jones & Cortner; Turnbull & Reed; Velich; Arkansas, Halls & Crawford; Kansas, Frydendall; Gets (7); Henderson; Jones & Cortner; Long (1), (2), (5); Taylor, D.; Oklahoma, Glass & Halloran; Halloran & Schrader; Jones & Glass; Long (2); McCulloch & Inglis; Texas, Constantine (1); Davis, W. B.; McCulloch & Inglis; Milstead; Raun (1), (2), (3), (4); Raun & Wilks; Short (3); Wilks & Laughlin; Montana, Hoffman & Taber; Johnson, L. J.; Knowlton; Manville (2); Mitchell, J. L.; Morrison, J. A.; Piottin (1), (2); Russell & Anderson; Taber & others; Wyoming, Anderson, C. C.; Armitage (1), (2); Black (2); Casebeer; Jones, D. A.; Jones & Mursaloğlu (1); Long & House; Mickey; Murie; Robinson, W. B.; Colorado, Anderson, S. (4); Borell; Cattlett (2); Denney; Halvorsen; Robinson, W. B.; Vaughan (1); Vaughan & Hansen; Ward; New Mexico, Anderson, S. (2); Constantine (1); Findley; Jones, C. J.; Jones, C. L.; Mohlenrich; Robinson, W. B.; Rodeck; Ross; Arizona, Bradshaw (1), (2); Burt (1); Cockrum; Commissaris; Constantine (1); Eddy; Findley; Findley & Jones; Gould; Hayward & Johnson; Huey; Lange, K. I.; Ross; Sows (2); White, R. W.; Utah, Daniel; Egoscue; Gashwiler & others (1), (2); Julander & others; Lee; Lee & Durrant (1), (2); Musser; Robinette & others; Twente; Young;

Idaho, Julander & others; McConnell & Dalke; Robel (1), (2); Nevada, Bartholomew & MacMillen; Gashwiler & others (1); Hall, E. R.; Quay (2); Robinette & others California, Ashcraft; Bakker; Bartholomew & Hudson; Bartholomew & MacMillen; Biswell; Boolootian; Dunmire; Fialer; Gard; Giles; Gilmore (3); Houck; Howard; Hubbard & McKeever; Ingles, (1), (2); Limbaugh; Quay (2); Rice (2); Roest; Rohe; Ross; Shields; Thaeler; Yocom & others; Baja California, Hubbs; Orr; Pacific Northwest, Sheppe (1); Oregon, Albright; Anderson, S. (1); Beer; Broadbooks (3); Constantine (1); Griffice; Johnson & Benson; Kebbe (1), (2), (3), (4); Yoakum; Washington, Armstrong; Brigham; Broadbooks (1); Clanton & Johnson (1), (2); Johnson, D. R.; Johnson & Benson; Johnson & Clanton; La Fave; McNeil; Scheffer; Sheppe (2); Wick & Penttila; Wilke & Fiscus.

Alaska.—Alaska, Chapman; Haltorn (2); Hoek; Kenyon & Rice; Klein & Olson; Libby; Mayer; Paradise & Manville; Pruitt (1); Rausch; Rausch & Ritcey; Wilke & Fiscus; Kodiak Island, Alaska, Feuer; Troyer (3); Afognak Island, Alaska, Troyer (2); Amchitka Island, Kenyon; Chernabura Is., Alaska, Fiscus; Pribilof Is., Nagasaki (2); Niggol; Aleutian Is., Kenyon & Rice.

Mexico.—Alvarez, T.; Anderson & Long; Broadbooks (2); Burt (2); Carter & Davis; Goodwin (1); Hall & Alvarez (1), (2); Hooper (1); Koopman; Lidicker (1), (2); Villa R. (1); Villa R. & Jimenez G.; Breton Island, Gulf of Mexico, Negus & others.

C. America and West Indies.—C. America, Goodwin (1); El Salvador, Burt & Stirton; Ondrias (2); Guatemala, Luna; W. Indies, Goodwin (2); Netherlands Antilles, Husson; Trinidad, Goodwin & Greenhall; Greenhall; Tobago, Goodwin & Greenhall; Greenhall; Curacao, Soot-Ryen; Bermuda, Van Gelder & Wingate; Bahamas, Backus; Cuba, Hall & Jones; Mona Is., West Indies, Pippin.

S. America.—Carvalho (2); Hershkovits (1); Hückinghaus (1); Ueck; Colombia, Hernández-Camacho; Bolivia, Olrog; British Guiana, Allsopp; Brazil, Avila-Pires; Bendeza (2); Carvalho (1); Ecuador, Anon (7); Peru, Bendeza (1), (3); Koford (1), (3); Soukup; Uruguay, Legrand; Praderi & Luzzardo; Argentina, Crespo; Massoia; Olrog; Pedersen; Chile, Mann, F. (1).

OCEANS, SEAS AND OCEANIC ISLANDS

N. Sea, Utrecht; Arctic, Ferens; Larson; Arctic seas, Zenkovitch; Chukchi Sea, Arctic Ocean, Nasu; N. Atlantic, Brown, S. G. (1); Øritland; Rasmussen; Pacific, Gilmore (1); Nikolsev; Norris & Prescott; Tikhomirov; N. Pacific, Dorofeev (2); Fujino; Gilmore (4); Kenyon & Rice; Nagasaki (1); Niggol; Ohsumi; N.E. Pacific, Radovich; White Sea, Chapsky (2); Dorofeev (1); Bering Sea, Arseniev (1); South Atlantic, Van Dusen (1); Antarctic seas, Ohsumi; Antarctic, Anon (19), (21); Arseniev (2); Brown, S. G. (2); Claridge; Gräber; Haga; Williamson (1); Azores, Anon (22); Ulstrand; Falkland Islands Dependencies, O'Gorman; S. Georgia, Øynes; Macquarie Island, Costin & Moore; Kerguelen Island, Ichihara; Pacific Islands, Watson, J. S.; Rarotonga I., Pacific, Berry, J. A.; Jaluit Atoll, Grassitt; Laysan I., Hawaii, King & Harrison; Galapagos Is., Eibl-Erbsfeldt; Hawaii, Uloth (3).

GEOLOGICAL (FOSSIL FAUNAS)

General.—U.S.S.R., Dubrovo; Gromova (1); Texas, Matthews; Florida, Olsen (2); Colombia, Bürgl.

Triassic.—Basutoland, Ginsberg (2).

Jurassic.—Portugal, Kühne (1); Germany, Kühne (2); Patagonia, Casamiquela.

Cretaceous.—England, Kermaek & Clemens; Mongolia, McKenna (3); Wyoming, McKenna (3); Turnbull; Utah, Clemens.

Cenozoic.—Great Britain, Anon (4); Kazakhstan, Nikiforova; India, Chakravarti; Pakistan, Chakravarti; Burma, Chakravarti; South Australia, Stirton & others.

Tertiary.—Europe, Tobien (2); Spain, Hernández-Pacheco & Crusafont Pairo; Macedonia, Psarianos; U.S.S.R., Gremyatsky (1); Libya, Arambourg & Magnier; N. America, Shotwell; Florida, Olsen (3); South Dakota, Green, M. (2).

Paleocene.—France, Russell, D. E.

Eocene: Old World.—Europe, Simons (1); France, Astre (1); Simons & Russell; Spain, Rullán; Honan, Chow, M. C. (1).

Eocene: New World.—Wyoming, Gazin; McKenna (2); Colorado, McKenna (1); Patagonia, Kraglievich (1).

Oligocene: Old World.—Europe, Dechaseaux; France, Beaumont, M. G. de; Spain, Santonja & Crusafont Pairo; Germany, Rothausen; Roumania, Gabuniya & Iliescu; Greece, Lüttig & Thenius; Kazakhstan, Gromova (2), (3); Gureev; Primorsk Terr., Gromova (4); Mongolia, Gromova (2), (3); Gureev; Trofimov; Sinkiang, Hu; Egypt, Kälén; Simons (2).

Oligocene: New World.—Nebraska, Hough; Reeder (2); Montana, Hough; Russell, D. A.; Wyoming, McKenna (2); Reed, K. M.; South Dakota, Burt & Wood; Hough; Reed, K. M.; Reeder (2); Colorado, Burt & Wood; Hough; Reed, K. M.; Reeder (2).

Miocene: General.—General, Trumler (2).

Miocene: Old World.—Europe, Beaumont, M. G. de France, Astre (2); Bergounioux & Crouzel (2), (3); Ginsburg (1), (4); Viret; Spain, Aguirre (1); Crusafont-Pairo; Crusafont-Pairo & Hürzeler; Koenigswald & Crusafont Pairo; Germany, Kuss; Tobien (1); Austria, Zapfe; Sicily, Colacicchi; Greece, Beaumont, M. G. de; U.S.S.R., Belokryz; Gabuniya (1); Moldavia, Gabuniya (1); Caucasus, Belyaeva & Gabuniya; Verestchagin (2); Georgia, Gabuniya (1); Crimea, Alekseeva (2); Azerbaijan, Gabuniya (1); Spasski; Kazakhstan, Gromova (3); Mongolia, Alekseeva (1); Belyaeva; India, Sahni & Tripathi; N. Africa, Arambourg (1); Libya, Arambourg (3), (4).

Miocene: New World.—Virginia, Anon (8); Florida, Olsen (1), (3); Texas, Wilson, J. A.; South Dakota, Green; Macdonald (2); Wyoming, Black (1); Colorado, Fagan; Wilson, R. W.; Nevada, Downs; California, Downs; Reeder (1); Webb, S. D.; Oregon, Downs; Mawby; Washington, Stirton; Venezuela, Hoffstetter; Patagonia, Hoffstetter.

Pliocene: General.—Trumler (2).

Pliocene: Old World.—Europe, Bergounioux & Crouzel (4); Kurtén (3); France, Bergounioux & Crouzel (1); Gabis; Germany, Dufhorn; Czechoslovakia, Fojfar (1), (2); Yugoslavia, Males (2); Macedonia, Garevski; Poland, Czyżewska (1), (2); Kowalski (1), (2); Sulimski; Ural, Jakhimovich; Caucasus, Gabuniya (2); Crimea, Lysenko (2); Yunnan, Chow, M.-C. (2), (3); Turkey, Chaput; Osanoy (2); Viret & Battaglia.

Pliocene: New World.—Florida, Olsen (1), (3); Kansas, Hazard; Woodburne; South Dakota, Green, M. (2); Macdonald (1); Oklahoma, Kitts & Myers;

California, Glen; Mitchell, E. D.; Tedford; S. America, Alvarez, E. F. de (2); Argentina, Kraglievich (3); Pascual; Reig (2); Ringuelet.

Quaternary: Old World.—U.S.S.R., Dubrovo.

Pleistocene: General.—Krantz; Trumler (2); Old World, Burchak-Abramovich (7).

Pleistocene, Old World: Europe.—Europe, Cowgill; Howell; Jánossy; Koby (2); Kurtén (3); Livingstone; Hertfordshire, Kerney; Gloucester, Richardson & Sandford; Worcester, Sandford; France, Astre (3); Beaumont, G. de; Koby (1), (3); Lumley; S.E. France, Bouchud & Wernert; Corsica, Sigogneau; Spain, Aguirre (2); Bataller; Holland, Bree (1); Koenigswald; Kortembout van der Sluis; Loose; Germany, Duphorn; Förster; Heller (1), (2); Karschny; Rutte; Siegfried (1), (2); Bavaria, Pruter; Austria, Sauerzopf (1), (2), (3); Czechoslovakia, Fejfar (1), (2); Jerman; Musil; Switzerland, Adam; Dannegger; Italy, Bartolomei; Italy, Boné; Cadeo; Erasmo & Zei; Gremyatsky (3); Leonardi; Preuschoff; Venzo; Lampedusa, Segre; Roumania, Haimovici; Necrasov & Haimovici; Yugoslavia, Males (1); Greece, Meletis; Mitsopoulos (2), (3); Psarianos; Poland, Wasilewski (2); Sweden, Martinsson; Lithuania, Baitekunas & Pashkevichus; Garnit; Gharutt; Vaitekunas & Pashkevichus; Spitzbergen, Birkenmajer.

Near East.—Reed, C. A. (3); Lebanon, Hootjer (2); Turkey, Ozansoy (1).

Asia.—U.S.S.R., Alekperova (1); Leibman; Yakutia, Vereshchagin (3); Zolinkov; Siberia, Farrand; S. U.S.S.R., Karlov; Ukraine, Danilova & Svislun; Georgia, Burchak-Abramovich (5), (6); Vekua (1), (2), (3); Caucasus, Burchak-Abramovich (1), (3), (9); Scherstjukov; Crimea, Lysenko (1); Ossetia, Burchak-Abramovich & Naniev; Azerbaidjan, Alekperova (2); Burchak-Abramovich (2), (3), (4); Burchak-Abramovich & Dzhafarov (1), (2); Dzhafarov; Gadzhiev; Vereshchagin (1); China, Chow, M. (1), (2); Chow & Chang; Chow & others; Hu & others; Hsu & others; Kahlke & others; Pei (4); Uryson; Shansi, Pei (2); Wang; S. China, Kahlke (2); Sechuan, Pei (1) (3); Woo (1), (2); Yunnan, Li, Y.; Pei (6); Hupei, Chin & others; Huang & Han; Kwantung, Chang, Y. P.; Kwangsi, Kahlke (1); Pei (5); Zhou; Japan, Nagasawa; Ishigaki I., Ryukyu Is., Whitmore; Borneo, Harrison, B. (1); Sarawak, Harrison & others; Hootjer (3), (4); Medway (1), (2), (3); Java, Erdbrink.

Australia.—W. Australia, Lundelius; Queensland, Woods; Victoria, Wakefield (1).

Africa.—Africa, Anon (26); N. Africa, Arambourg (2); Tunis, Arambourg & Arnould; Gotti; East Africa, Weiner; Tanganyika, Clark; Koenigswald & others; Leakey (2), (3), (4); Leakey & others; Wu; Yakimov; South Africa, Cooke; Dart (4); Dart & Craig; Hootjer & Singer (2); Mason, R. J.; Singer; Tobias (1); Robinson, J. T. (2); Transvaal, Dart (1); Freedman (2); Graaf (1), (3); Cape Province, Hootjer & Singer (1); Tchad, Coppens.

Pleistocene: New World.—Pennsylvania, Guilday (2); Florida, Arata; Stephens; Tennessee, Parmelee; Missouri, Schmaltz; Indiana, Melhorn; Wayne (1); Nebraska, Jakway; Kansas, Paulson; Oklahoma, Kitts; Texas, Dalquest (2); Jelinek; Savage; Slaughter (1) (2); S. Dakota, Green, M. (1); Green, M. & Martin; Utah, Stokes & Condie; California, Giles; Glen; Kurtén (2); White & Downs; Alaska, Farrand; Mexico, Dalquest (1); Chiasson; Greenland, Mitsopoulos (1); Colombia, Camacho & Porta; Porta (1), (2), (3); Ecuador, Castellanos (1); Venezuela, Royo & Gómez; Brazil, Castellanos (1);

Vidal; Argentina, Alvarez, E. F. de (1), (3), (4), (5); Castellanos (1), (2); Cattoi; Kraglievich (4); Reig (1); Cuba, Arredondo (1), (2); Brodkorb.

Oceans and Seas.—Bering Sea, Ozaki.

III.—SYSTEMATIC INDEX

In the arrangement of the Orders of the Mammalia Simpson's classification and terminology in his "The Principles of Classification and a Classification of Mammalia," 1945, have been adopted.

Fossil tracks from Jurassic of Patagonia thought to be mammalian, Casamiquela.

Affinities of allotheres, McKenna (3).

Order Menotyphla recognised: †Leptictidae, †Pantolestidae, Tupaiidae, †Apatymyidae included, McKenna (1).

MAMMALIA (?) incertae sedis

†*Likhoeia* gen. nov. for type species *L. ellenbergeri* sp. nov. Triassic, Likhoele, Mafeteng, Basutoland, p. 3853, Ginsburg (2).

ORDER MONOTREMATA

Brain of monotremes, Friant (1).

TACHYGLOSSIDAE

Tachyglossus behaviour in captivity, Hediger & Kummer.

†ORDER MULTITUBERCULATA

Multituberculate teeth from Cretaceous of S.E. England, Kermack & Clemens.

Multituberculate fragments from Jurassic of Portugal, descr., fig'd., Kühne (1).

Unallocated multituberculate premolars (cf. †*Prochetonodon*) from Eocene of Colorado descr., fig'd., McKenna (1).

Known material of shoulder girdle of multituberculates descr., fig'd., disc., McKenna (3).

†PLAGIAULACIDAE

†*Loxaulax valdensis* (?) teeth reported from Cretaceous of S.E. England, Kermack & Clemens.

†PTILODONTIDAE

†*Camptomus amplius* Marsh, 1889, probably a marsupial, McKenna (3).

†*Djadochatherium matthewi* Cretaceous, Mongolia, scapulocoracoid descr., fig'd., similar specimens from Cretaceous, Wyoming descr., fig'd., McKenna (3).

†*Ectypodus* key tooth characters of species tabulated, discussed: *E. tardus* teeth descr., fig'd., *E. cf. hazeni* fragmentary molar fig'd., both from Eocene of Colorado, McKenna (1).

†*Neoliotomus ultimus* Eocene, Colorado, molar teeth descr., fig'd., McKenna (1).

†FAMILY incertae sedis

†*Paulchoffatia* gen. nov. for type species *P. delgadoi* Jurassic, Guimarota, near Leiria, Portugal, p. 379, Kühne (1).

†ORDER PANTOTHERIA

Pantothere teeth from Jurassic of Portugal descr., fig'd., Kühne (1).

Pantothere jaw fragments from Jurassic of Germany descr., fig'd., disc., Kühne (2).

†DROYLESTIDAE

†*Melanodon goodrichi* (?) molar portion reported from Cretaceous of S.E. England, Kermack & Clemens.

†ORDER SYMMETRODONTA

Symmetrodont tooth from Cretaceous of S.E. England, Kermack & Clemens.

†SPALACOTHERIIDAE

†*Spalacotherium tricuspide* (?) molar reported from Cretaceous of S.E. England, Kermack & Clemens.

ORDER MARSUPIALIA

Brain of marsupials, Friant (1).

Coracoid in marsupials, McKenna (3).

Chromosomes of marsupials, Sharman (1).

Embryonic membranes and placentation in diprotodont marsupials, Sharman (2).

DIDELPHIDAE

Didelphid molar from Lance formation, Cretaceous of Wyoming descr., fig'd., Turnbull.

Oligocene didelphids reviewed, variation, Hough.

†*Didelphidectes* gen. nov. for type species *D. pumilis* sp. nov. Oligocene, Pipestone Springs, Montana, p. 225, Hough.

Didelphis marsupialis male attempting to mate with dead female, Bragg; gonadogenesis, litter size, Ebert; activity study, Pilleri (2); population structure, reproductive data in Illinois; toe clipping technique for marking young, Sanderson (3); swimming capacity, Wilber & Weidenbacher; *D. m. virginiana* status in Oregon, Kebbe (2); visual learning capacity, Neumann; nuclear sex difference in somatic cells, Ohno & others (3); tapetum lucidum, Pirie; taste reception, Tamar.

†*Emballia marginalis* Cope, 1873, a synonym of *Geolabis: E. alternans* Cope, 1873, an insectivore, probably inseparable from *Ankydon*, McKenna (2).

†*Herpetotherium* author's diagnosis repeated, revised: *H. fugax* revised diagnosis, disc., Hough.

Lutrolina crassicaudatus cranial peculiarities, Prasad (1).

Marmosa notes, Benderu (1); Argentinian forms reviewed, Olrog; West Indian forms reviewed, keyed: *M. mitis luridavolta* subsp. nov. Speyside, Tobago, West Indies, p. 5, Goodwin (2); *M. brevicaudata brevicaudata*, *M. b. emiliae* differential characters, Carvalho (1).

Monodelphis adusta peruviana notes, Benderu (1).

†*Nanodaphys* author's diagnosis repeated: *N. minutus* lower dentition descr., Hough.

†*Pediomys hatcheri* Cretaceous, Utah, molar descr., fig'd., Clemens.

†*Peradectes protinnominatus* sp. nov. Eocene, Alheit Pocket, Craig Quadrangle, Moffat County, Colorado, p. 41, McKenna (1).

†*Peratherium* generic characters, *P. titanelis* Oligocene, Montana, descr., *P. scalare* Cope disc., *P. donohoei* sp. nov. Oligocene, Pipestone Springs, Montana, p. 222, Hough; *P. sp.* Miocene, Germany, teeth descr., fig'd., Tobien (1).

†BORHYAENIDAE

†*Chasicostylus* gen. nov. for type species *C. castroi* sp. nov. Pliocene, Arroyo Chasico, Buenos Aires, Argentina, p. 29, Reig (2).

†*Notosmilus* gen. nov. p. 55, for type species *N. pattersoni* sp. nov. p. 56, Pliocene, Barranca de los Lobos between "Playa Los Acañilados" and Baliza Caniá, Chapadmalal, Partido de General Pueyrredon, Province of Buenos Aires, Argentina, Kraglevich (3).

DASYURIDAE

Antechinus flavipes reproduction, development of young, laboratory maintenance, Marlow (4).

Dasyercus cristicauda general illustr. account, Fleay.

Dasyuroides byrnei further specimens recorded, illustr., Mack.

Thylacinus cynocephalus breeding season, Guller (1); former distribution, history of decline in Tasmania, Guller (3).

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Notoryctes typhlops brain, Spatz & Stephan; Starek & others.

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Isodon macrourus breeding in captivity, Mackerras & Smith.

Macrotis lagotis cranial peculiarities, Prasad (1).

PHALANGERIDAE

†*Burrarnys parvus* further cave material reported from Gippeland, Victoria, Wakefield (1).

Eudromicia lepida possible record from cave material from Gippeland, Victoria, Wakefield (1).

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†*Palaeopetaurus elegans* possibly a synonym of *Gymnobelideus leadbeateri*, Wakefield (1).

Phascogalea cinerea export from Australia, 1959, and subsequent controversy, Anon (6); morbidity and mortality, Backhouse & Bolliger; haematology, Bolliger & Backhouse; reproduction in captivity, Pournelle (3).

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†*Propleopus* classification discussed; *P. oscillans* type specimen re-described, fig'd, further material from Pleistocene of New South Wales descr., **Woods**.

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†*Micropternodus borealis* reviewed, affinities discussed; rostrum and other material from Oligocene of Oregon descr., fig'd., **Russel**, D. A.

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†Leptictidae referred to Order Menotyphla; unallocated leptictid material from Eocene of Colorado descr., **McKenna** (1).

†*Diacodon minutus* Jepsen, 1930, considered a *Leptacodon*, **McKenna** (1).

†*Leipsanolestes* Simpson, 1928, referred to *Entomolestes*, **McKenna** (1).

†*Palaeictops tauri-cinerei* similar material from Eocene of Colorado descr., **McKenna** (1).

†*Sespedectes* referred to Amphilemuridae, **McKenna** (1).

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†*Leptacodon* discussion, referred to Erinaceidae **McKenna** (2); *L. packi* considered a leptictid; *L. munusculum* possibly generically separable from *L. tener*; *L. jepseni* sp. nov. Eocene, west end of Albeit Pocket, Craig Quadrangle, Moffat County, Colorado, p. 51, **McKenna** (1).

†*Metacodon* Clark, 1936, a synonym of *Geolabis* Cope, 1884, **McKenna** (2).

†*Plesiosorex* affinities discussed, **McKenna** (2); affinities discussed; *P. coloradensis* sp. nov. Miocene, Logan County, Colorado, p. 21, **Wilson**, R. W.

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†*Entomolestes* referred to Amphilemuridae: *E. cf. nitens* Eocene, Colorado, material descr., fig'd., **McKenna** (1).

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†*Geolabis* discussed: *G. marginalis* Oligocene, Wyoming, fragmentary skull and lower jaw descr., fig'd., *G. rhynchaenus* Cope, 1884, a synonym, **McKenna** (2).

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†*Hypacodon* gen. nov. for type species *H. praecursor* sp. nov. Eocene, near Fort Bridger, Wyoming, p. 148, **McKenna** (2).

†*Lantanothereum* sp. Miocene, California, left mandibular fragment descr., fig'd., first American record, **Webb**, S. D.

†*Metechinus* cf. *marlandensis* Miocene, Colorado, molar descr., **Wilson**, R. W.

†*Meterix* affinities discussed, **McKenna** (2).

†*Palaeosceptor* reviewed: *P. acridens*, *P. rectus* Oligocene, Mongolia, further material descr., fig'd., **Trofimov**.

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†*Proteriz loomisii* possible lower dentition descr., fig'd. from Micene of S. Dakota, Macdonald (2).

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†*Centetodon* suggested removal from Nictitheriidae, McKenna (1).

†*Entomacodon minutus* marsupial resemblances discussed, McKenna (1).

†*Kentrogomphos strophensis* White, 1954, a synonym of *Micropternodus borealis*, Russell.

†*Myolestes dasypelix* possibly a metacodont, McKenna (1).

†*Nyctitherium* species discussed; *N. nitidum*, *N. curticens* and specimens referred to *N. celatum* by Matthew (1918) thought generically distinct from *N. velox* (genotype) and type specimen of *N. celatum*, not thought to be closely related to *Entomacodon minutus*, transferred to Amphilemuridae, McKenna (1).

†*Protentomodon* not thought to be closely related to *Nyctitherium*: referred to Insectivora or Menotyphla, incertae sedis, McKenna (1).

†*Stilpnodon* possible a metacodont, McKenna (1); possibly a primitive erinaceoid, McKenna (2).

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†*Beremendia fissidens* Pliocene, Poland, material descr., Kowalski (1).

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†*Blarina brevicauda* Pleistocene, Oklahoma, maxillary descr., fig'd., Stephens.

†*Blarinoides mariae* Pliocene, Poland, material descr., fig'd., Kowalski (1).

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†*Crociodura robusta* sp. nov. Pleistocene, Lobsing, Neustadt/Donau, Bavaria, Germany, p. 25, Heller (2).

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†*Domnina compressa* Galbreath, 1953, referred to *Heterosorex*, Mawby.

†*Domninoidea* Green, 1956, a talpid, Tedford.

†*Hesperosorex chassae* sp. nov. Pliocene, Chassé Quarry, about 1-2 miles northwest of Ricardo, Kern County, California, p. 58, Tedford.

†*Heterosorex* history reviewed, phylogeny: further N. American occurrence (cf. *H. sansaniensis*) reported from Miocene of Oregon, Mawby; *H. roperi* sp. nov. Miocene, Logan County, Colorado, p. 27, Wilson, R. W.

†*Microsorex pratensis* Pleistocene, Kansas, jaw fragment descr., Paulson.

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†*Sorex arcticus*, *S. cinereus* Pleistocene, Oklahoma, mandibular fragments, teeth, descr., fig'd., Stephens; *S. runtonensis* Pliocene, Poland, material descr., fig'd., Kowalski (1); *S. vireti*, p. 33, *S. compressus*, p. 35, both spp. nov. Miocene, Logan County, Colorado, Wilson, R. W.

†*Sorex (Neosorex) megapalustris* sp. nov. Pleistocene, Cudahy ash mine, Meade County, Kansas, p. 132, Paulson; *S. (N.) palustris* Pleistocene, Oklahoma, mandibular fragments descr., fig'd., Stephens.

†*Sorex (Sorex) cudahyensis*, *S. (S.) lacustris* Pleistocene, Kansas, jaw fragments descr., fig'd., Paulson.

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†*Desmana kormosi* Pliocene, Poland, material descr., fig'd., **Kowalski (1).**

†*Dominoides* Green, 1956, a talpid, **Tedford.**

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†*Mydecodon* gen. nov. for type species *M. martini* sp. nov. Miocene, Logan County, Colorado, p. 38, **Wilson, R. W.**

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†*Proscalops miocaenus*, *P. secundus* amended diagnoses, *P. tertius* sp. nov. Oligocene, "Badlands, South Dakota," p. 470, **Reed, K. M.**; *P. cf. secundus* Miocene, Colorado, teeth descr., fig'd., **Wilson, R. W.**

†*Scapanus shultzi* sp. nov. Pliocene, about one third of a mile west of Ricardo, Kern County, California, p. 66, **Tedford.**

†*Scalopoides* gen. nov. for type species *S. isodens* sp. nov. Miocene, Logan County, Colorado, p. 42, **Wilson, R. W.**

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†*Talpa minor* Pliocene, Poland, material descr., **Kowalski (1).**

†PANTOLESTIDAE

†Pantolestidae referred to Order Menotyphla: unallocated pantolestid material from Eocene of Colorado descr., fig'd., **McKenna (1).**

†*Palaesinopa didelphoides* similar material from Eocene of Colorado descr., fig'd., **McKenna (1).**

†MIXODECTIDAE

†Mixodectidae transferred to Order Menotyphla, **McKenna (1).**

†*Crascops* Stock, 1934, referred to Microsyopidae; transferred to Primates, **McKenna (1).**

†*Cynodontomys* Cope, 1882, referred to Microsyopidae; transferred to Primates, **McKenna (1).**

†*Dracontolestes* Gazin, 1941, transferred to Menotyphla, **McKenna (1).**

†*Elpidophorus* Simpson, 1927, referred to Primates, placed in Plesiadapidae, incertae sedis, **McKenna (1).**

†*Eudaemonema* Simpson, 1935, referred to Tupaioidae, incertae sedis, **McKenna (1).**

†*Microsyops* Leidy, 1872, referred to Microsyopidae; transferred to Primates, **McKenna (1).**

†*Mixodectes* Cope, 1883 (including *Indrodon* Cope 1884) transferred to Menotyphla, **McKenna (1).**

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†Apheliscidae transferred to Condylarthra; considered a subfamily of Hyopsodontidae, **McKenna (1).**

†*Apheliscus* transferred to Hyopsodontidae; *A. nitidus* Eocene, Colorado, material descr., fig'd., **McKenna (1).**

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†*Baranomys* Kormos, 1933, a synonym of *Microtodon*, *Kowalski* (2).

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†*Pedomys lanensis* Pleistocene, Kansas, jaw fragment descr., fig'd., **Paulson**.

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†*Macrocapromys* gen. nov. pp. 10, 48, for type species *M. acedo* sp. nov. p. 48, fig'd., p. 10, Pleistocene, Cueva San José de las Lamas, Santa Fé, Habana, Cuba, Arredondo (2) [N.V.]; remarks on original publication of name, reasons for validity, Brodkorb.

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Bos (*Bibos*) *sauvelli* detailed study, origin and systematic position discussed, Bohlken (2).

†*Bos* Pleistocene, Old World, detailed monograph, Burchak-Abramovich (7); Pleistocene, Lebanon, notes, measurements, Hooijer (2); *B. mastanzadei* sp. nov. Pleistocene, Apscheronak, Azerbaidjan, p. 7, Burchak-Abramovich (2) [N.V.].

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†*Bubalus* sp. Pleistocene, Caucasus, find reported, Burchak-Abramovich (1).

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†*Capra aegagrus* Pleistocene, Lebanon, notes, tooth measurements, Hooijer (2).

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†*Colombibos* gen. nov. for type species *C. atactodontus* sp. nov. Pleistocene, Soatá, Department of Boyacá Colombia, p. 46, Camacho & Porta.

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†*Damalavus* gen. nov. for type species *D. borocci* sp. nov. Miocene, Oued el Hamman, near Bou Hanifia Dam, Oran, Algeria, p. 120, Arambourg (1).

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†*Gazella* Pleistocene, Lebanon, notes, measurements, Hooijer (2); *G. praegaudryi* sp. nov. Miocene, Oued el Hamman, near Bou Hanifia Dam, Oran, Algeria, p. 123, Arambourg (1).

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†*Ovis* cf. *ammon* Pleistocene, Azerbaidjan, material descr., fig'd., Vereshchagin (1); *O. catclawensis* referred specimens from Pleistocene of Utah descr., fig'd., evolution disc., Stokes & Condie.

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†*Saiga binagadensis* sp. nov. Pleistocene, Binagadinsk, Azerbaidjan, p. 13, Alekperova (2).

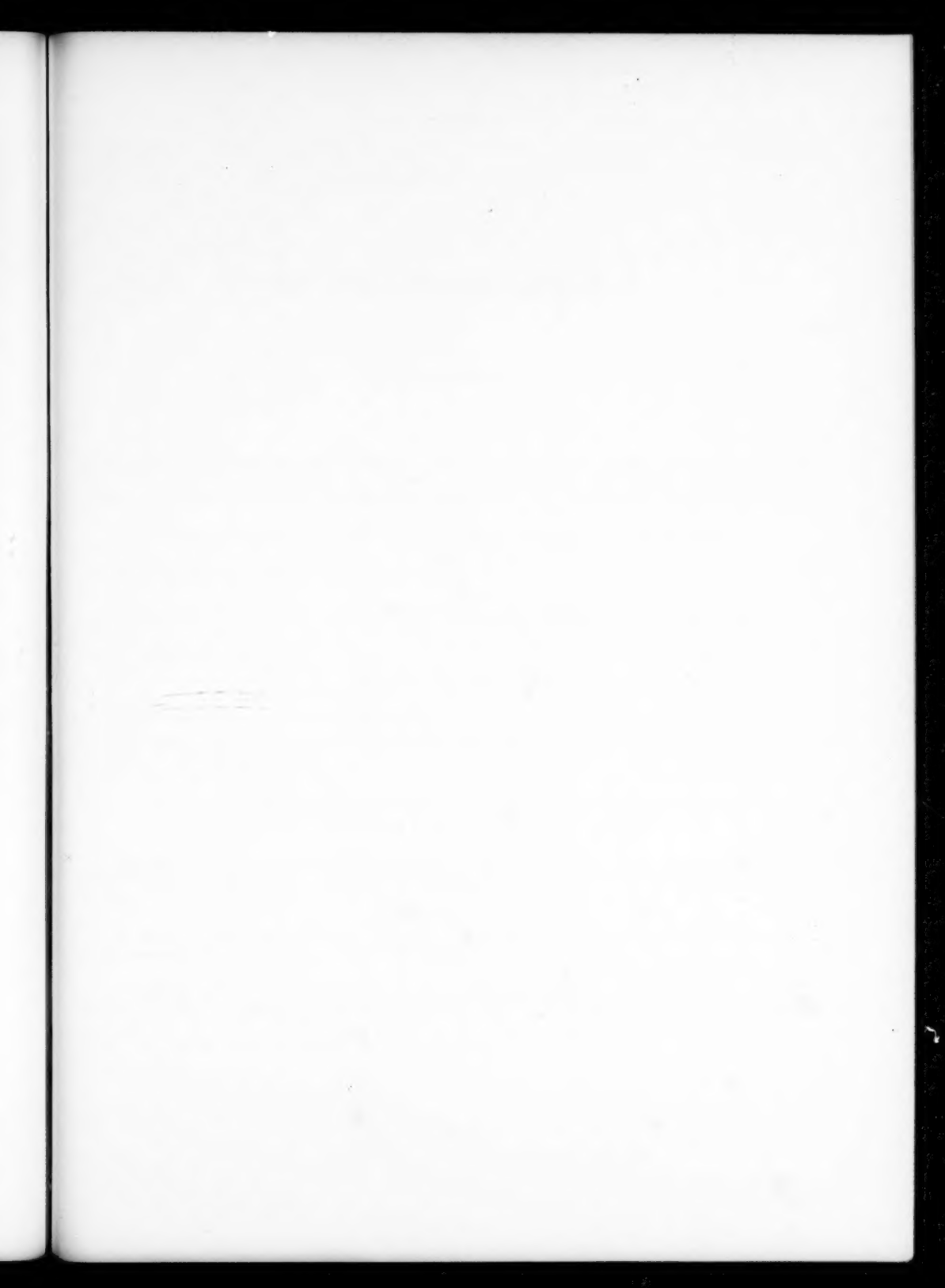
†*Spirocerus* reviewed; *S. kiakhtensis* further material, Sokolov, I. I.

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†*Symbos cavifrons* Pleistocene, Nebraska, further material recorded: *S. convexifrons* Barbour, 1934, not considered a valid species, Jakway.

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